

# 1987 Annual Report

Vital Statistics of Massachusetts

Massachusetts Department of Public Health  
Public Document No. 1

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.1  
1987





# ERRATA

This page replaces Table A-4B on page 27.

TABLE A-4B  
VITAL EVENTS BY COUNTY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES (3)	DIVORCES (3)	RESIDENT NATURAL INCREASE
		OCCURRENCE	RESIDENT	OCCURRENCE	RESIDENT	TOTAL	NEONATAL (2)			
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49034	16994	28781
BARNSTABLE	173737	1844	2255	2110	2196	14	6	2062	448	59
BERKSHIRE	141700	1968	1732	1625	1545	9	7	1218	465	187
BRISTOL	488574	5591	6894	4256	4712	47	34	4085	1642	2182
DUKES	11071	180	187	98	122	0	0	254	60	65
ESSEX	644209	9446	9935	6140	6454	77	43	5807	2018	3481
FRANKLIN	66337	942	961	577	683	7	4	560	237	278
HAMPDEN	441426	7325	6763	4866	4627	51	41	3634	1475	2136
HAMPSHIRE	145543	1326	1493	878	1082	10	9	1093	357	411
MIDDLESEX	1366463	18460	18735	11419	12014	104	77	11250	3822	6721
NANTUCKET	5991	81	91	65	66	0	0	198	27	25
NORFOLK	604304	6093	7783	4754	5616	42	36	4887	1328	2167
PLYMOUTH	436218	2396	6675	3085	3577	39	27	3294	1516	3098
SUFFOLK	659115	20723	10691	9930	6535	127	89	5144	1206	4156
WORCESTER	660430	9858	10148	6387	6333	81	59	5548	2393	3815

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE AND DIVORCE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.





*The Commonwealth of Massachusetts*  
*Executive Office of Human Services*  
*Department of Public Health*

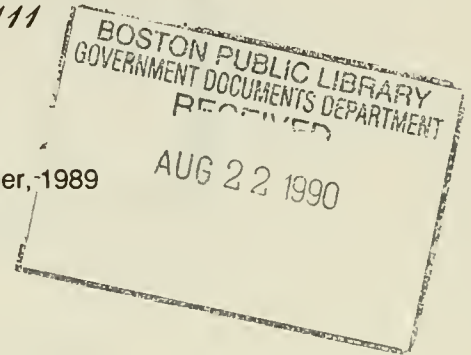
*150 Tremont Street*

*Boston 02111*

Michael S. Dukakis  
Governor

Philip W. Johnston  
Secretary

David H. Mulligan  
Commissioner



To the Honorable Senate and  
House of Representatives:

We have the honor to submit as required by Chapter 111, Section 2 of the General Laws, the one hundred forty-sixth annual report on statistics of births, deaths, fetal deaths, marriages and divorces, in Massachusetts for the calendar year 1987.

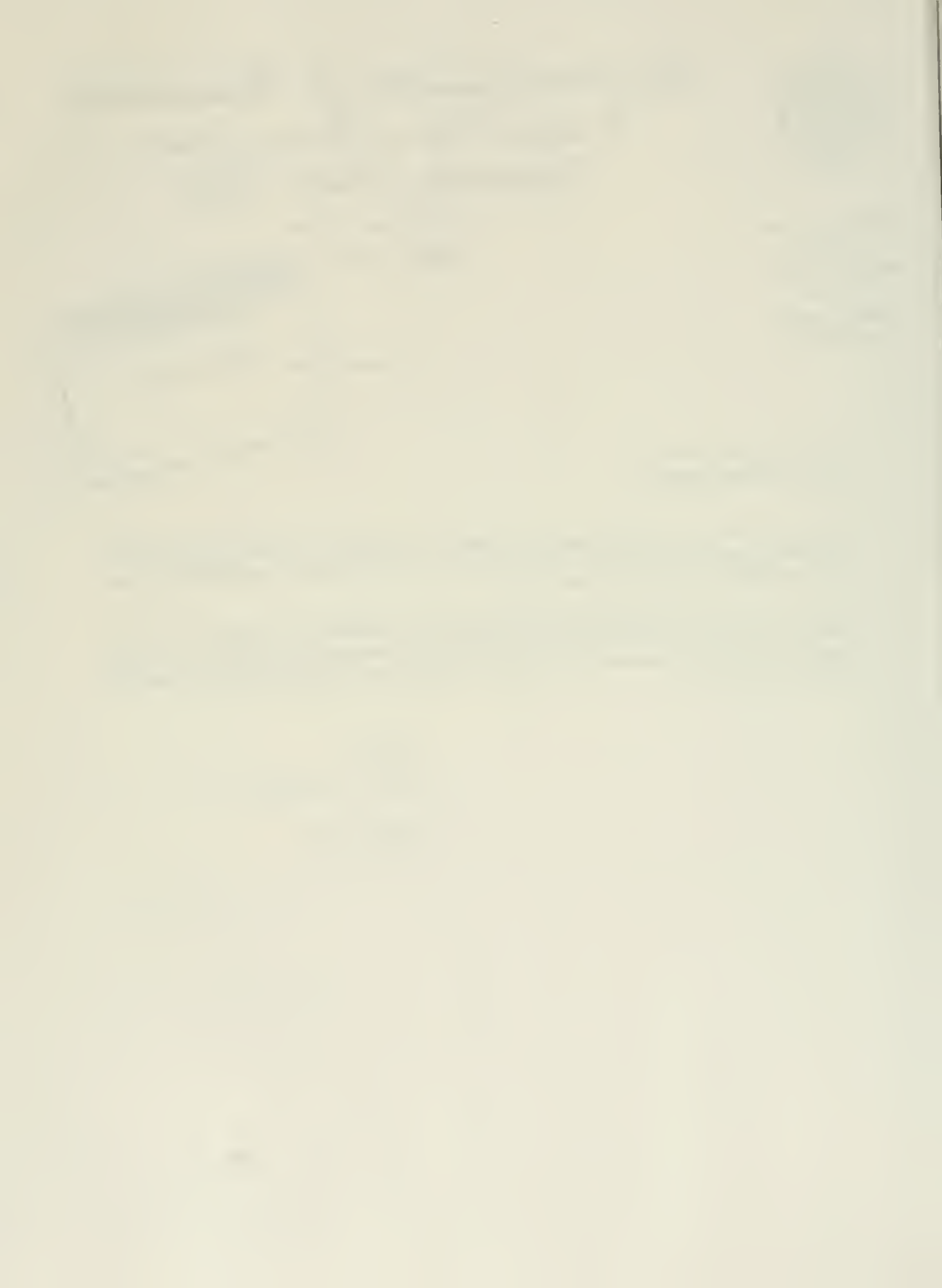
This is the twenty-fourth Annual Report of Vital Statistics published by the Department of Public Health and is intended to assist in the development of policy and programmatic initiatives within the Department, as well as to provide State officials and agencies, and the general public, with valuable statistical information.

Sincerely,

A handwritten signature in cursive script, reading "David H. Mulligan".

David H. Mulligan  
Commissioner





**ANNUAL REPORT  
VITAL STATISTICS OF MASSACHUSETTS  
(PUBLIC DOCUMENT #1)**

**1987**

**THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH**

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***DECEMBER, 1989***





## ACKNOWLEDGEMENTS

This publication of the *1987 ANNUAL REPORT OF VITAL STATISTICS* is the result of the combined efforts of the following data providers. We gratefully acknowledge the assistance provided by the 351 city and town clerks, hospital personnel, physicians, funeral directors, probate courts, clinics, and Department of Public Health personnel, without whose efforts there would be no vital statistics.

Department of Public Health staff most significantly involved in the production of the *1987 ANNUAL REPORT OF VITAL STATISTICS* include:

Robert A. Danley, population statistics;

Joan L. Gancarski, Bureau of Health Statistics, Research and Evaluation: assistance and technical data from Advance Data: Births 1987 and Advance Data: Deaths 1987;

Michael Healey, Division of Data Processing: data file management and vital events series printouts;

Lynne Steinman, Public Information and Data Management: supervision of computer graphics and special table production, with programming by Greg Hanna, Ralph Marple, Duke Rhoden, Robert S. Woodburn, and Charlene Zion;

Dennis Sterzin and Roger Davenport, Department of Public Health Graphic Arts Unit: graphics layout and assistance;

Phyllis Zeuli, Assistant Registrar for Statistics: supervision of data collection, coding and editing, with technical assistance from Lisa Varnerin (Statistics Unit Supervisor) and Robert Coffin (Chief Nosologist).

The joint efforts of all the staff of the Registry of Vital Records and Statistics are necessary to produce the data contained in this publication. Special acknowledgement is made to the following Registry supervisors:

Karin Barrett, Data Quality Assurance Coordinator, who oversees the hospital query program for birth certificate data and provides assistance in developing specialized table production;

Alan Goldin, Director of Automation, who is responsible for the installation and supervision of the Automated Vital Statistics System (AVSS) and all computer-based systems in the Registry office;

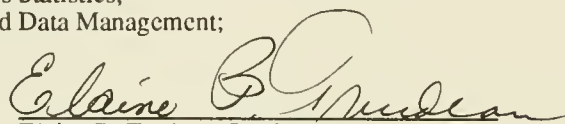
Harold Leonard, Supervisor of the Records Unit, which is responsible for maintaining all records and issuing certified copies;

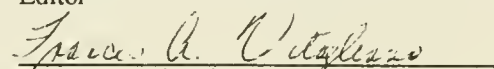
James Orseno, Supervisor of the Operations Unit, which is responsible for all printing and mailing of forms;

Phyllis Rotman, Supervisor of the Registration Unit, which is responsible for coordination with cities and towns to produce the data in a timely fashion.

The *1987 ANNUAL REPORT OF VITAL STATISTICS* has been compiled and produced under the general supervision and direction of:

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## INTRODUCTION

The *Annual Report of Vital Statistics* (Public Document No. 1) has been continuously published since 1842. This is the 24th edition produced by the Department of Public Health. This report, required under the provisions of Section 2, Chapter 111 of the Massachusetts General Laws, tabulates data on Massachusetts births, fetal deaths, deaths, marriages, divorces, and population for calendar year 1987. Approximately 2,000 copies of the report are distributed to federal, state, and local governmental agencies, private and public health planners and researchers, students, and members of the general public. The report provides its users with an overview of the health status of the Massachusetts population.

Vital statistics data may be tabulated either in terms of residence or occurrence. Residence data include all events which occur to residents of the Commonwealth wherever they occur. Occurrence data include all those events which occur within the state, including those which occur to out-of-state residents. There is an interstate exchange of copies of birth, death and fetal death records among the fifty states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and all Canadian provinces. These records are exchanged for statistical purposes only, for events which occur in states other than where the individual resides; this allows each of the states and provinces to track the births and deaths of their residents. The majority of the data presented in this report for births and deaths is based on residence data. Marriage and divorce data, however, only reflect events which occurred within the Commonwealth.

## REGISTRATION

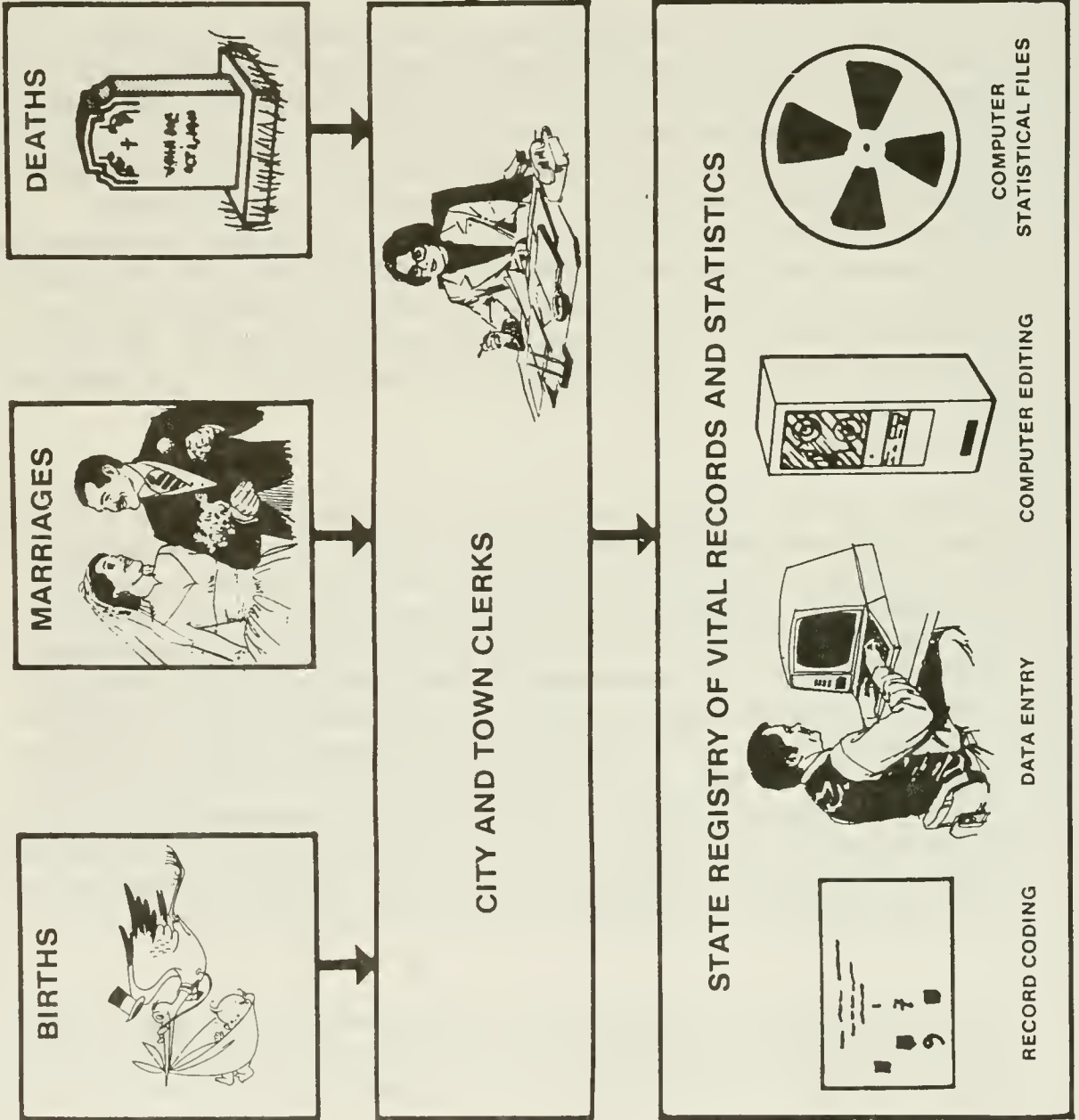
The first government-operated system of vital events registration anywhere in the world began in the Commonwealth of Massachusetts in 1639 under colonial administration. Prior to that time, in countries such as England with a vital registration system, the responsibility for the registration of vital events had been placed on church officials. The Massachusetts system mandated the registration of vital events by the clerks of the communities. In 1841, the Massachusetts legislature established the first statewide coordination for the registration of these events by requiring that copies of the events registered in the local cities and towns be sent to the Secretary of State. In 1976, the responsibility for the state coordination was transferred to the Department of Public Health. This was accomplished to rejoin the statistical and registration functions which had been separated by the 1964 transfer of the statistical function to the Department of Public Health. With the exception of the administrative location of the State Registry, the actual mechanics of the system have changed remarkably little over the years.

With limited exceptions, most vital records in Massachusetts are open, public records. The figure on the next page illustrates the registration process in Massachusetts. For open birth and death records, there is a triple registration process in Massachusetts. The

# The Vital Records and Statistics Process

PRODUCT

PROCESS



event is first recorded in the city or town where the event occurred. The clerk of that community is then required to forward a certified copy of the record to the community where the person resided at the time of the event and a copy to the State Registry. Certified copies of the records may be issued from local or state records. If the record is a restricted record, such as those of out-of-wedlock births, the registration occurs only in the community where the event occurred and the state office.

In addition to receiving a legal copy of each birth record from the city or town in which the birth occurred, the State Registry also receives a confidential copy of the birth record directly from the hospital or birth center where the birth occurred. This copy includes confidential medical information in addition to the legal information. It is this copy of the record which is processed to produce the statistical information on births contained in this report.

Since 1986 the State Registry has developed a program of direct electronic transmission of birth records from hospitals. The system used in Massachusetts is called the Automated Vital Statistics System (AVSS). It was developed at the University of California, Santa Barbara. More than 50% of all birth records are now received through this method. AVSS has contributed to reducing processing time at both the hospital level and the State Registry, while the built-in edits of the system increase the quality of the data.

Anyone wishing to be married in the Commonwealth may receive their license from any of the 351 cities or towns in the state regardless of where they reside or where the marriage is to take place in the Commonwealth. The community issuing the license is required to send an attested copy of the marriage record to the State Registry.

The Registry of Vital Records and Statistics receives directly from hospitals or physicians the reports of fetal deaths of either twenty or more weeks gestation or a weight of at least 350 grams. There are no local filings of fetal death reports. Abstracts of divorces granted are also sent directly to the State Registry from the Registers of Probate from each county probate court.

### ***STATISTICAL PROCESSING AND TABULATING***

The records received in the State Registry are carefully examined for legal errors and inconsistencies. As part of the computerization process, significant computer editing is also done. A computerized hospital query program is part of the AVSS program. The Registry also has a data quality assurance program that includes on-site visits to clerks and hospitals that have difficulties in reporting and training to all groups involved in the data collection process.

Annually, when registration is considered as complete as possible, statistics are aggregated for presentation in this report, special studies, and program monitoring and surveillance.



Anyone using statistical information for comparisons over time should be aware of inconsistencies and changing conventions for classification and coding. This is particularly important when using cause of death information. Codes used for classifying cause of death in this report are based on the Ninth Revision of the International Classification of Diseases, World Health Organization. Classification of variables such as race, nativity, and marital status may also differ over time.

It is hoped that this report will be useful to a wide range of health data users in the Commonwealth, as well as educational planners, demographers, and historians. Questions concerning these data and requests for more detailed findings should be directed to:

**Massachusetts Department of Public Health  
Bureau of Health Statistics, Research and Evaluation  
150 Tremont Street  
Boston, Massachusetts 02111  
(617) 727-DATA**

# VITAL EVENTS



## SECTION A

### VITAL EVENTS

#### HIGHLIGHTS

#### LIVE BIRTHS

- In 1987, there were 84,343 live births to Massachusetts residents.
- Live births increased by 2.6% from 1986 to 1987.
- The 1987 live birth rate in Massachusetts per 1,000 population increased from 14.1 in 1986 to 14.4 in 1987.
- Massachusetts' 1987 live birth rate of 14.4 per 1,000 population remains below the 1987 U.S. rate of 15.7.
- The largest number of births occurred in July (9.0%--7,569), and the fewest occurred in February (7.1%--5,989).

#### DEATHS

- In 1987, 55,562 Massachusetts residents died.
- The number of deaths decreased by 0.5% from 1986 to 1987.
- The rate of deaths per 1,000 population also decreased from 9.6 in 1986 to 9.5 in 1987.
- The U.S. death rate remained constant in 1987 at 8.7. (Differences between the crude death rates in Massachusetts and the U.S. may reflect differences in the age distribution of the population.)
- The largest number of deaths occurred in January (9.1%--5,036), and the fewest occurred in September (7.6%--4,212).

#### FETAL DEATHS

- There were 498 reportable fetal deaths to Massachusetts residents in 1987.
- Reportable fetal deaths decreased by 13.2% from 1986 to 1987, resulting in a fetal death rate of 5.9 per 1,000 live births and fetal deaths.

#### INFANT DEATHS

- In 1987, 608 infant deaths (those less than 1 year) occurred to Massachusetts residents.
- The Massachusetts infant mortality rate decreased from 8.4 deaths per 1,000 live births in 1986 to 7.2 deaths in 1987.
- In 1987, the black infant mortality rate decreased from 19.7 in 1986 to 15.5 in 1987.
- The Massachusetts 1987 infant mortality rate of 7.2 per 1,000 live births was 29 percent below the U.S. rate of 10.1.

## MARRIAGES

- In 1987, 49,034 marriages took place in Massachusetts.
- The number of marriages decreased by 1.9% from 1986 to 1987. Nationally, the number of marriages increased by 0.9% during the same period.
- The 1987 Massachusetts rate of 8.4 marriages per 1,000 population was below the U.S. rate of 9.9.
- For the first time in many years, June was replaced as the favorite month for marriages. The largest number of marriages occurred in October with 6,169 (12.6%), and the fewest occurred in January (1,663--3.4%).

## DIVORCES

- In 1987, 16,994 divorces were granted in Massachusetts.
- Divorces in Massachusetts decreased by 14.2% from 1986 to 1987.
- The 1987 Massachusetts divorce rate of 2.9 divorces per 1,000 population was below the U. S. rate of 4.8.
- The largest number of divorces were finalized in July with 1,564 (9.2%), and the fewest in May (1,144--6.7%).

## NATURAL INCREASE

- The rate of natural increase in Massachusetts reflected an increase to 4.9 per 1,000 residents in 1987 from a rate of 4.5 in 1986.
- The 1987 U.S. rate of natural increase of 7.0 remains far above that of Massachusetts.

The Vital Events section provides basic information on all vital events. In addition to the information highlighted above, this section contains summary birth and death data by city, town, and county. More detailed information is contained in the sections on the individual events.

## DEFINITIONS AND RATES IMPORTANT FOR THIS SECTION INCLUDE

OCCURRENCE	Occurrence data reflect where the event took place without regard to residence. In Massachusetts, place will be one of 351 cities or towns.
RESIDENCE	The usual place of residence as reported by the mother (for births) or the informant (for deaths). An infant's residence is considered that of the mother. While occurrence data include only events that occurred within Massachusetts, residence data for births and deaths include those which may or may not have occurred within Massachusetts.
NATURAL INCREASE	The difference between the number of resident live births and the number of resident deaths.



## CRUDE RATES OF VITAL EVENTS

$$\text{BIRTH RATE} = \frac{\text{No. of Resident Live Births}}{\text{Total Population}} \times 1,000$$

$$\text{FETAL MORTALITY} = \frac{\text{No. of Resident Fetal Deaths}}{\text{Resident Live Births} + \text{Resident Fetal Deaths}} \times 1,000$$

$$\text{INFANT MORTALITY} = \frac{\text{No. of Resident Deaths LT 1 Year}}{\text{Resident Live Births}} \times 1,000$$

$$\text{NEONATAL MORTALITY} = \frac{\text{No. of Resident Deaths LT 28 Days}}{\text{Resident Live Births}} \times 1,000$$

$$\text{DEATH RATE} = \frac{\text{No. of Resident Deaths}}{\text{Total Population}} \times 1,000$$

$$\text{MARRIAGE RATE} = \frac{\text{No. of Occurrence Marriages}}{\text{Total Population}} \times 1,000$$

$$\text{DIVORCE RATE} = \frac{\text{No. of Occurrence Divorces}}{\text{Total Population}} \times 1,000$$



**TABLE A-1  
SELECTED RECORDS IN VITAL STATISTICS  
MASSACHUSETTS  
1987**

**NATALITY**

Ages of Mothers: 12-48

Ages of Fathers: 14-81

Sets of Twins: 940

Sets of Triplets: 12

Most Births Occurred: October 23, 1987 (300 births)

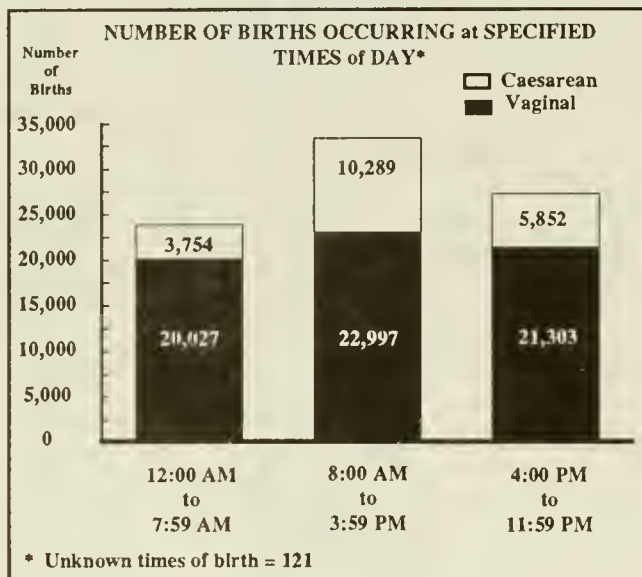
Fewest Births Occurred: August 23, 1987 (155 births)

Highest # of Births at: Brigham and Women's Hospital (9,996 births)

Lowest # of Births at: Fairview Hospital (75 births)

**Ten Most Popular Names For Babies**

<i>Boys' Names</i>	<i>Number</i>	<i>Girls' Names</i>	<i>Number</i>
Michael	2,214	Jessica	1,221
Matthew	1,510	Ashley	1,186
Christopher	1,440	Amanda	1,175
Daniel	1,138	Jennifer	892
David	995	Nicole	715
Andrew	981	Sarah	709
John	941	Elizabeth	581
Joseph	841	Stephanie	570
Ryan	809	Danielle	504
James	800	Samantha	498



**MORTALITY**

Male Decedents 100 Years and Older: 66

Female Decedents 100 Years and Older: 295

Most Deaths Occurred: May 31, 1987 (190 deaths)

Fewest Deaths Occurred: September 2, 1987 (108 deaths)

Most Suicides Occurred: September (62)

Most Homicides Occurred: September and December (20 each)

Most Motor Vehicle Deaths Occurred: August (84)

Weekday Most Deaths Occurred: Friday (8,053 deaths)

Weekday Fewest Deaths Occurred: Thursday (7,779 deaths)

**MARRIAGE**

Ages of Brides: 14-88

Ages of Grooms: 15-93

Most Popular Month for Marriages: October (6,169 marriages)

Least Popular Month for Marriages: January (1,663 marriages)

Greatest Age Difference When Bride older than Groom: 31 years

Greatest Age Difference When Groom older than Bride: 56 years

**DIVORCE**

Length of Marriages Involved in Divorces: <1 Year to 55 Years of Marriage    Most Common Length of Marriage Prior to Divorce: 3 Years

Month Most Divorces Granted: July (1,564 divorces)

Month Fewest Divorces Granted: May (1,144 divorces)

**FIGURE A-1**

**1987 MASSACHUSETTS VITAL EVENTS**

**Each day Massachusetts residents had approximately:**

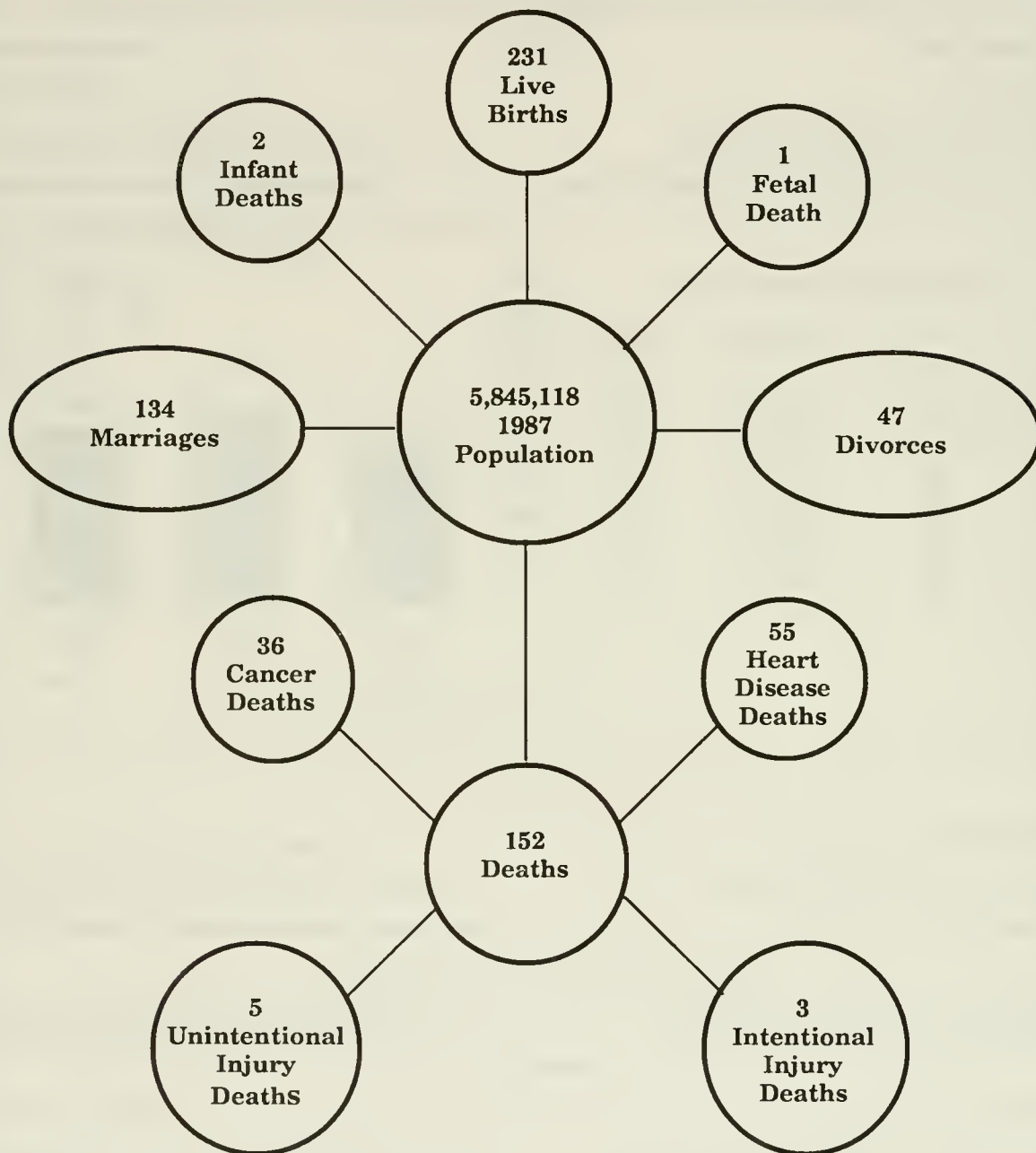


TABLE A-2  
NUMBER AND CRUDE RATES OF VITAL EVENTS  
MASSACHUSETTS AND UNITED STATES  
1986-1987

VITAL EVENT	Massachusetts				United States			
	1987		1986		1987		1986	
	Number	Rate	Number	Rate	Number	Rate	Number	% Change
LIVE BIRTHS	84,343	14.4	82,163	14.1	3,809,394	15.7	3,756,547	+ 1.4
FETAL DEATHS	498	5.9	574	6.9	59,358**	7.6**	59,343*	+ 0.02
TOTAL DEATHS	55,562	9.5	55,860	9.6	2,123,323	8.7	2,105,361	+ 0.8
Infant Deaths	608	7.2	695	8.4	38,408	10.1	38,891	- 1.2
Neonatal Deaths	432	5.1	478	5.8	24,627	6.5	25,212	- 2.3
MARRIAGES	49,034	8.4	49,990	8.6	2,421,000**	9.9**	2,407,099*	+ 0.9
DIVORCES	16,994	2.9	19,809	3.4	1,157,000**	4.8**	1,178,000*	- 0.2

NOTES: Neonatal and infant deaths are included in total deaths; fetal deaths are excluded from total deaths. Figures for marriages and divorces reflect occurrence, not residence.

The rates for live births, total deaths, marriages and divorces are per 1,000 population.

Rates for infant and neonatal deaths are per 1,000 live births.

Rates for fetal deaths are per 1,000 live births and fetal deaths.

\* =Revised

\*\*=Provisional



# FIGURE A - 2

## RATE OF NATURAL INCREASE

### 1910 - 1987

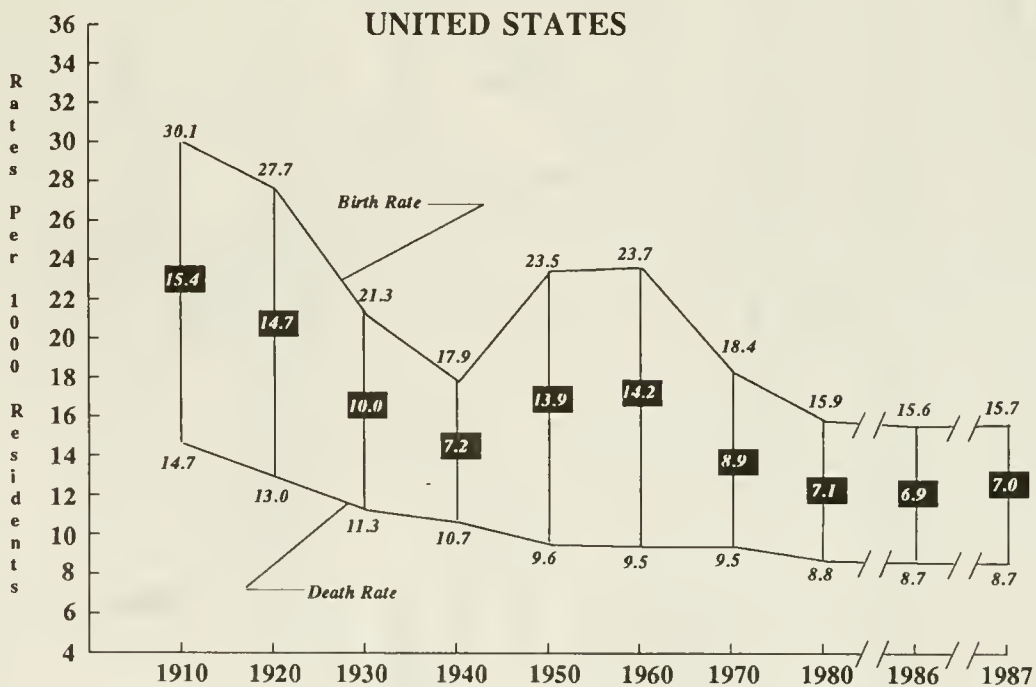
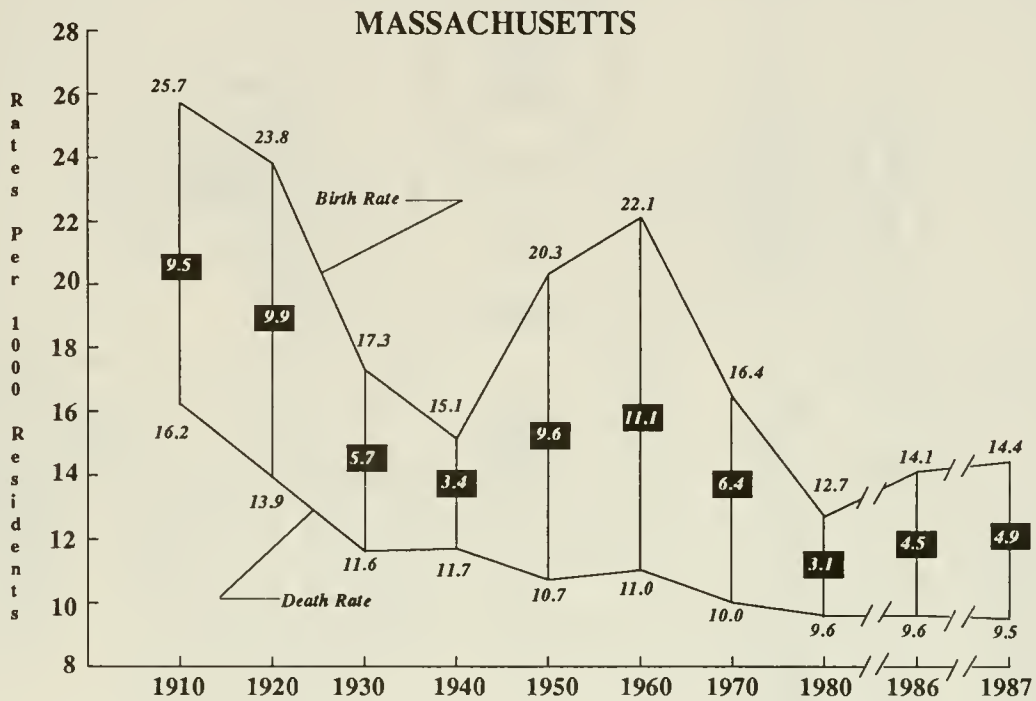


TABLE A-3  
VITAL EVENTS BY MONTH  
MASSACHUSETTS RESIDENTS  
1987

		BIRTHS	FETAL DEATHS	DEATHS	Infant Deaths*	Neonatal Deaths*	MARRIAGES	DIVORCES
TOTALS		84,343	498	55,562	608	432	49,034	16,994
January	N	6,574	39	5,036	50	29	1,663	1,502
Rank		11	6	1	5	9	12	5
February	N	5,989	37	4,492	39	28	2,597	1,353
Rank		12	8	8	9	10	9	9
March	N	7,076	47	4,913	63	46	2,100	1,412
Rank		7	3	2	1	2	11	8
April	N	7,191	51	4,461	46	32	3,129	1,257
Rank		6	2	10	7	8	8	10
May	N	7,424	42	4,793	60	47	6,046	1,144
Rank		2	4	5	2	1	2	12
June	N	7,397	35	4,276	52	38	5,850	1,547
Rank		3	9	11	3	5	4	3
July	N	7,569	34	4,617	46	34	3,904	1,564
Rank		1	10	7	7	7	6	1
August	N	7,001	41	4,490	51	41	5,817	1,561
Rank		8	5	9	4	4	5	2
September	N	7,248	57	4,212	47	37	5,987	1,446
Rank		4	1	12	6	6	3	6
October	N	7,220	38	4,796	60	43	6,169	1,543
Rank		5	7	4	2	3	1	4
November	N	6,671	39	4,641	42	28	3,368	1,230
Rank		10	6	6	8	10	7	11
December	N	6,983	38	4,835	52	29	2,404	1,435
Rank		9	7	3	3	9	10	7

\*Infant and neonatal deaths are included in total resident deaths;  
neonatal deaths are included in infant deaths.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS : OCCURRENCE : RESIDENT :	DEATHS : OCCURRENCE : RESIDENT :	INFANT DEATHS : TOTAL : NEONATAL (2) :	MARRIAGES : LICENSES : OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5845118	86233 : 84343 :	56190 : 55562 :	608 : 432 :	49032 : 49034 :	28781
ABINGTON	13967	2	57	1	92	127
ACTION	17360	2	64	0	139	160
ACUSHNET	9070	0	18	2	66	19
ADAMS	10078	0	38	0	61	-33
AGAWAM	27028	0	162	0	203	50
ALFORD	398	0	0	0	3	5
AMESBURY	14494	3	144	2	125	128
AMHERST	33549	7	47	0	200	67
ANDOVER	26895	2	70	0	243	125
ARLINGTON	44386	7	377	0	342	21
ASHBURNHAM	5024	0	8	2	40	42
ASHBY	2793	0	0	0	8	26
ASHFIELD	1536	2	4	1	16	22
ASHLAND	11347	2	11	3	106	156
ATHOL	10795	2	165	1	97	21
ATTLEBORO	35098	988	466	2	347	352
AUBURN	14418	0	24	0	131	74
AVON	4806	0	12	0	51	25
AYER	6821	0	164	4	191	266
BARNSTABLE	37224	1300	992	1	435	28
BARRE	4376	1	13	2	32	18
BECKET	1639	1	1	0	10	22
BEDFORD	12469	0	189	1	142	96
BELCHERTOWN	10090	6	15	0	62	72
BELLINGHAM	14249	2	13	0	104	165
BELMONT	24852	2	82	3	246	-20
BERKLEY	3855	0	3	0	1	36
BERLIN	2227	0	3	0	18	7
BERNARDSTON	1804	0	6	0	16	15
BEVERLY	36584	1394	594	2	348	95
BILLERICA	37745	4	71	5	259	379
BLACKSTONE	7192	1	14	0	66	51

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS OCCURRENCE : RESIDENT :	DEATHS OCCURRENCE : RESIDENT :	INFANT DEATHS TOTAL : NEONATAL (2)	MARRIAGES LICENSES : OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5845118	86233 : 84343	56190 : 55562	608 : 432	49032 : 49034	28781
BLANDFORD	1138	0	0	0	8	8
BOLTON	2870	0	7	0	26	25
BOSTON	570853	20716	9445	112	4366	3845
BOURNE	16153	2	108	0	123	65
BOXBOROUGH	3074	0	2	0	15	43
BOXFORD	6199	0	6	0	22	61
BOYLSTON	3527	0	69	0	15	13
BRAINTREE	35186	1	290	0	27	13
BREWSTER	6998	0	88	2	284	6
BRIDGEWATER	19319	0	24	0	77	16
BRIMFIELD	2714	0	0	1	104	141
BROCKTON	96426	1215	1413	0	1	15
BROOKFIELD	2774	0	7	15	786	926
BROOKLINE	53141	5	225	1	9	-2
BUCKLAND	1911	1	17	3	619	-27
BURLINGTON	22900	1	2	0	9	1
CAMBRIDGE	90338	1684	361	0	240	121
CANTON	18349	1	1376	9	1017	320
CARLISLE	4184	0	60	1	178	48
CARVER	10524	0	8	0	13	34
CHARLEMONT	1217	0	21	0	39	83
CHARLTON	8195	1	13	0	5	12
CHATHAM	6409	1	38	1	14	72
CHELMSFORD	31548	1	79	0	41	12
CHELSEA	25635	3	76	0	114	-63
CHESHIRE	3278	0	123	6	301	149
CHESTER	1202	0	4	0	227	194
CHESTERFIELD	1248	0	1	1	13	31
CHICOPEE	56249	0	3	0	7	16
CHILMARK	629	0	135	2	8	11
CLARKSBURG	1794	0	3	0	399	107
CLINTON	12535	0	116	1	24	11
					101	-2
					69	84

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	(3) : (4)	
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49032	49034	28781
COHASSET	7254	0	82	37	77	0	0	63	103	5
COLRAIN	1668	1	34	4	17	1	0	13	12	17
CONCORD	16369	1871	161	344	133	3	0	153	186	28
CORWAY	1386	0	23	5	10	0	0	3	14	13
CUMMINGTON	820	0	10	0	7	0	0	0	4	3
DALTON	6483	0	81	42	86	0	0	40	47	-5
DANVERS	23944	745	270	352	258	2	2	262	400	12
DARTMOUTH	25484	0	238	90	207	1	1	137	189	31
DEDHAM	23655	1	299	66	256	1	0	403	235	43
DEERFIELD	4735	2	51	22	42	0	0	37	53	9
DENNIS	14217	0	158	114	204	2	1	117	91	-46
DIGHTON	5461	0	67	11	53	5	3	37	49	14
DOUGLAS	4663	0	74	10	37	0	0	23	19	37
DOVER	4791	0	58	10	33	1	1	24	24	25
DRACUT	24162	0	365	29	178	0	0	151	154	187
DUDLEY	8918	0	110	10	73	1	1	83	69	37
DUNSTABLE	2093	0	31	1	8	0	0	8	6	23
DUXBURY	13863	1	163	51	111	1	0	83	156	52
EAST BRIDGEWATER	10406	1	137	24	77	0	0	73	129	60
EAST BROOKFIELD	1824	0	20	2	15	0	0	28	28	5
EAST LUNGMEADOW	12857	0	133	115	150	4	4	108	118	-17
EASTHAM	4309	0	62	15	42	0	0	33	45	20
EASTHAMPTON	16604	1	224	18	132	3	3	134	124	92
EASTON	19518	0	275	22	99	0	0	144	196	176
EDGARTOWN	2952	0	46	11	26	0	0	55	89	20
EGREMONT	1313	0	15	5	15	0	0	4	7	0
ERVING	1423	0	15	3	11	0	0	7	0	4
ESSEX	2965	0	43	6	25	0	0	23	22	18
EVERETT	36309	0	507	443	428	4	4	336	323	79
FAIRHAVEN	15815	0	162	81	217	3	2	107	134	-55
FALL RIVER	90259	1892	1391	1450	1103	7	6	718	658	288
FALMOUTH	25695	535	366	388	291	4	1	274	355	75

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

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(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.



# VITAL EVENTS BY COMMUNITY 1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS : OCCURRENCE : RESIDENT :	DEATHS : OCCURRENCE : RESIDENT :	INFANT DEATHS TOTAL : NEONATAL (2) :	MARRIAGES LICENSES : OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5845118	86233 : 84343 :	56190 : 55562 :	608 : 432 :	49032 : 49034 :	28781
FITCHBURG	39333	1036	451	5	368	254
FLORIDA	704	0	0	0	2	3
FOXBOROUGH	14421	0	34	0	113	53
FRAMINGHAM	64061	2142	757	2	592	268
FRANKLIN	19944	1	26	2	165	202
FREETOWN	7971	0	13	1	38	57
GARDNER	18293	335	339	1	180	43
GAY HEAD	242	0	2	0	2	0
GEORGETOWN	5896	1	9	0	37	51
GILL	1305	0	5	0	3	-6
GLOUCESTER	28033	308	308	5	255	139
GOSHEN	749	0	3	0	3	10
GOSNOLD	42	0	0	0	1	-2
GRAFTON	11904	1	30	1	73	50
GRANBY	5646	0	4	0	21	13
GRANVILLE	1327	1	2	0	5	4
GREAT BARRINGTON	7427	77	172	2	84	-49
GREENFIELD	17838	929	344	2	227	37
GROTON	7194	1	13	0	47	79
GROVELAND	5028	1	7	0	34	47
HADLEY	4251	1	14	0	22	15
HALIFAX	6291	0	11	0	38	30
HAMILTON	7068	0	15	0	40	70
HAMPDEN	4656	0	49	0	17	14
HANCOCK	604	0	0	0	0	3
HANOVER	11919	1	17	0	103	60
HANSON	9211	1	36	0	65	79
HARDWICK	2301	0	2	0	22	7
HARVARD	13410	1	20	2	17	17
HARWICH	10061	3	42	0	87	-40
HATFIELD	3197	2	5	0	16	8
HAVERHILL	48359	753	583	8	397	408

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS : OCCURRENCE : RESIDENT	DEATHS : OCCURRENCE : RESIDENT	INFANT DEATHS : TOTAL : NEONATAL (2)	MARRIAGES : LICENSES : OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5845118	86233 : 84343	56190 : 55562	608 : 432	49032 : 49034	28781
HAWLEY	386	0	1	0	3	-1
HEATH	596	1	1	0	0	7
HINGHAM	20458	0	78	0	157	19
HINSDALE	1757	1	29	0	10	4
HOLBROOK	10884	1	19	2	108	63
HOLDEN	13671	2	124	0	76	73
HOLLAND	1752	0	0	0	12	28
HOLLISTON	12835	1	12	1	90	136
HOLYOKE	42445	1410	998	9	383	296
HOPEDALE	3967	0	29	0	29	31
HOPKINTON	8777	0	11	0	54	95
HUBBARDSTON	1968	0	143	0	14	24
HUDSON	17457	0	40	0	146	93
HULL	9829	2	222	1	87	75
HUNTINGTON	1958	0	156	1	6	29
IPSWICH	11537	0	34	0	107	37
KINGSTON	8606	0	56	0	132	83
LAKEVILLE	7950	1	13	0	60	39
LANCASTER	6233	0	37	0	35	58
LANESBOROUGH	3141	0	16	0	56	16
LAWRENCE	62750	1795	0	0	16	827
LEE	6054	0	698	19	548	3
LEICESTER	9668	1	28	0	55	82
LENEX	6584	1	13	2	74	-34
LEOMINSTER	35010	1073	74	1	60	232
LEVERETT	1567	1	321	2	367	12
LEXINGTON	28241	2	322	0	11	9
LEYDEN	603	0	146	0	224	8
LINCOLN	7695	1	0	1	6	20
LITTLETON	7167	2	13	0	45	39
LONGMEADOW	16298	0	32	1	55	12
LOWELL	93542	2694	62	2	86	959
			1434	13	785	

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS OCCURRENCE : RESIDENT	DEATHS OCCURRENCE : RESIDENT	INFANT DEATHS TOTAL : NEONATAL (2)	MARRIAGES LICENSES : OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5845118	86233 : 84343	56190 : 55562	608 : 432	49032 : 49034	28781
LUDLOW	18586	0	153	1	172	29
LUNENBURG	8760	0	7	0	76	35
LYNN	78254	913	921	15	673	623
LYNNFIELD	11290	0	11	1	73	36
MALDEN	53286	2170	476	7	466	122
MANCHESTER	5110	3	19	1	50	1
MANSFIELD	14695	1	21	0	113	148
MARBLEHEAD	19023	0	68	0	208	27
MARION	4251	0	10	1	36	2
MARLBOROUGH	30915	2	366	4	347	240
MARSHFIELD	22700	0	31	1	185	183
NASHPEE	5952	0	28	1	44	67
MATTAPOISETT	5952	0	13	0	51	6
NAYNARD	9861	1	18	1	96	60
MEDFIELD	10646	0	151	1	75	86
MEDFORD	56828	5	342	4	442	13
MEDWAY	9570	1	37	0	72	99
NELROSE	28596	1245	467	0	197	25
MENDON	3475	0	3	2	23	27
MERRIMAC	4818	0	9	0	27	26
METHUEN	39513	1160	652	3	316	169
MIDDLEBOROUGH	18149	1	213	2	130	143
MIDDLEFIELD	450	0	0	0	11	0
MIDDLETON	4760	0	5	0	32	37
MILFORD	24063	466	337	2	203	177
MILLBURY	11780	0	28	2	111	140
MILLIS	7192	1	5	0	57	44
MILLVILLE	2097	0	15	0	17	107
MILTON	25506	4	335	2	194	26
MONROE	141	0	0	0	0	7
MONSON	7563	0	12	0	0	1
MONTAGUE	8074	0	109	2	38	25
			102	0	56	23

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES : ISSUED : (3)	OCCURRENCE (4)	
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49032	49034	28781
MONTEREY	963	2	11	3	10	0	0	3	2	1
MONTGOMERY	676	0	5	1	2	0	0	3	0	3
MOUNT WASHINGTON	98	0	1	0	0	0	0	2	7	1
MAHANT	3862	0	42	20	39	0	0	27	51	3
MAINTUCKET	5991	81	91	65	66	0	0	124	198	25
NATICK	29939	752	420	339	244	0	0	270	231	176
NEEDHAM	27253	1	287	271	280	1	1	228	190	7
NEW ASHFORD	144	0	2	0	1	0	0	0	1	1
NEW BEDFORD	97138	2055	1542	1400	1229	9	4	884	811	313
NEW BRAINTREE	695	0	14	0	4	0	0	7	6	10
NEW MARLBOROUGH	1337	1	16	0	4	0	0	3	12	12
NEW SALEM	855	0	8	0	6	0	0	4	3	2
NEHBURY	5355	0	75	7	26	1	1	48	38	49
NEWBURYPORT	16541	861	233	329	200	0	0	144	172	33
NEWTON	81941	2839	870	642	688	6	5	713	731	182
NORFOLK	7883	1	142	148	34	0	0	57	45	108
NORTH ADAMS	17097	390	240	301	206	3	2	149	128	34
NORTH ANDOVER	22788	1	249	77	178	1	1	133	167	71
NORTH ATTLEBORO	24334	0	378	46	171	2	1	239	195	207
NORTH BROOKFIELD	4248	0	67	6	37	2	2	26	34	30
NORTH READING	11714	1	170	26	89	2	2	94	87	81
NORTHAMPTON	29126	1065	276	574	287	0	0	299	305	-11
NORTHBOROUGH	11134	0	171	27	75	0	0	84	93	96
NORTHBRIDGE	12419	4	195	85	127	2	1	102	102	68
NORTHFIELD	2440	0	30	9	35	0	0	13	25	-5
NORTON	14050	0	209	52	82	0	0	89	98	127
NORWELL	9534	0	111	39	55	0	0	61	62	56
NORWOOD	28047	932	354	619	293	2	1	270	251	61
OAK BLUFFS	2391	176	45	69	40	0	0	40	38	5
OAKHAM	1341	0	24	0	6	0	0	2	7	18
ORANGE	7418	1	115	11	71	0	0	53	63	44
ORLEANS	6220	0	49	40	99	1	1	79	86	-50

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

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(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.



TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT	OCCURRENCE :	RESIDENT	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	(3) : (4)	
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49032	49034	28781
OTIS	975	0	15	0	8	0	0	0	4	7
OXFORD	12243	0	183	27	90	0	0	88	96	93
PALMER	11747	1	166	117	129	3	0	122	86	37
PAXTON	3812	1	44	7	27	0	0	20	30	17
PEABODY	46038	0	575	271	386	3	2	394	381	189
PELHAM	1338	0	14	3	6	0	0	8	9	8
PEMBROKE	14983	0	263	26	85	1	1	82	74	178
PEPPERELL	9845	1	169	14	61	0	0	67	48	108
PERU	763	0	10	1	3	0	0	4	5	7
PETERSHAM	972	0	16	2	5	0	0	1	17	11
PHILLIPSTON	1056	0	20	1	9	0	0	5	19	11
PITTSFIELD	49707	1492	677	816	518	3	2	487	430	159
PLAINFIELD	468	1	12	1	4	0	0	5	5	8
PLAINVILLE	6095	1	109	22	52	0	0	71	75	57
PLYMOUTH	41164	819	679	529	372	3	2	290	302	307
PLYMPTON	2322	0	23	1	9	0	0	10	23	14
PRINCETON	2835	0	54	2	9	0	0	23	42	45
PROVINCETOWN	3501	1	36	49	61	0	0	46	58	-25
QUINCY	82331	867	1105	857	996	7	6	925	777	109
RANDOLPH	28464	0	401	57	245	5	5	230	227	156
RAYNHAM	9589	0	100	14	60	0	0	76	60	40
READING	22517	4	312	31	178	0	0	194	166	134
REHOBOTH	8694	3	119	7	43	1	1	57	85	76
REVERE	43741	4	589	115	459	6	4	361	309	130
RICHMOND	1632	0	11	0	7	0	0	8	6	4
ROCHESTER	4084	0	46	3	17	0	0	14	18	29
ROCKLAND	15544	0	257	103	156	0	0	134	93	101
ROCKPORT	6565	1	80	37	108	0	0	54	80	-28
ROWE	392	0	5	0	3	0	0	3	6	2
ROWLEY	4185	0	67	18	45	2	0	30	29	22
ROYALSTON	1081	0	14	2	8	0	0	3	8	6
RUSSELL	1599	0	17	0	12	0	0	5	8	5

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS : OCCURRENCE : RESIDENT :	DEATHS : OCCURRENCE : RESIDENT :	INFANT DEATHS : TOTAL : NEONATAL (2) :	MARRIAGES : LICENSES : OCCURRENCE ISSUED : (3) : (4)	RESIDENT NATURAL INCREASE
STATE TOTAL	5845118	86233 : 84343 :	56190 : 55562 :	608 : 432 :	49032 : 49034 :	28781
RUTLAND	4629	0	11	0	17	52
SALEM	37752	1503	684	3	352	95
SALISBURY	7364	1	24	1	64	43
SANDISFIELD	800	0	9	0	9	-3
SANDWICH	12942	0	45	2	98	89
SAUGUS	25664	0	77	4	208	34
SAVOY	771	0	0	0	0	8
SCITUATE	17370	0	61	1	108	77
SEEKONK	12864	0	21	1	270	49
SHARON	14629	3	28	1	83	140
SHEFFIELD	2672	2	7	0	21	16
SHELBURNE	2044	0	15	0	19	10
SHERBORN	4192	0	2	0	24	40
SHIRLEY	5702	0	3	0	40	45
SHREWSBURY	22681	3	63	5	187	76
SHUTESBURY	1249	3	0	0	2	14
SOMERSET	18211	0	39	1	155	-37
SOMERVILLE	73122	3	411	9	538	183
SOUTH HADLEY	16641	0	33	3	112	0
SOUTHAMPTON	4532	0	3	3	23	26
SOUTHBOROUGH	6371	0	6	1	61	60
SOUTHBURIDGE	16476	572	301	0	184	106
SOUTHWICK	7817	0	10	0	57	43
SPENCER	11457	0	19	0	106	80
SPRINGFIELD	147462	5908	2432	20	1407	1169
STERLING	6713	0	8	0	39	40
STOCKBRIDGE	2377	0	8	0	34	-14
STONEHAM	22470	705	291	2	187	68
STOUGHTON	27170	2321	465	5	181	155
STOW	5383	1	2	0	35	50
STURBRIDGE	7570	3	9	3	82	45
SUDBURY	14065	1	40	2	120	105

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(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.



TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL :	NEONATAL (2)	LICENSES : ISSUED :	OCCURRENCE (3) :	
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49032	49034	28781
SUNDERLAND	2975	0	40	28	20	0	0	23	15	20
SUTTON	6620	1	81	2	23	1	1	15	40	58
SWAMPSCOTT	12932	0	135	51	152	2	2	114	137	-17
SWANSEA	15877	0	157	34	107	0	0	130	163	50
TAUNTON	46486	650	710	439	441	11	10	410	360	269
TEMPLETON	6073	0	59	17	60	0	0	45	59	-1
TENKSBURY	25516	0	414	191	175	1	1	206	159	239
TISBURY	3540	3	50	7	36	0	0	40	47	14
TOLLAND	257	0	2	0	3	0	0	1	1	-1
TOPSFIELD	5575	1	62	5	33	0	0	26	51	29
TOWNSEND	8755	0	151	11	45	1	1	49	51	106
TRURO	1501	0	5	8	15	0	0	13	21	-10
TYNGBOROUGH	7858	0	147	11	41	3	3	74	22	106
TYRINGHAM	371	0	4	3	3	0	0	0	1	1
UPTON	4230	1	72	17	32	0	0	29	24	40
UXBRIDGE	8943	1	140	7	78	2	1	67	71	62
WAKEFIELD	25010	0	348	79	238	3	3	199	199	110
WALES	1513	0	21	1	9	0	0	5	6	12
WALPOLE	20026	1	255	23	131	2	2	150	138	124
WALTHAM	57238	701	662	622	529	2	1	522	475	133
WARE	9774	241	141	146	113	1	1	72	75	28
WAREHAM	20872	352	280	230	199	1	0	136	153	81
WARREN	3948	0	78	8	47	3	2	23	16	31
WARWICK	611	0	10	1	5	0	0	4	5	5
WASHINGTON	608	0	8	9	6	0	0	2	10	2
WATERTOWN	33145	5	389	122	353	2	2	343	233	36
WAYLAND	12092	0	133	42	83	0	0	82	99	50
WEBSTER	14953	2	287	207	182	5	4	147	128	105
WELLESLEY	26740	1	278	100	202	1	0	190	239	76
WELLFLEET	2467	0	35	12	30	0	0	21	44	5
WENDELL	790	0	6	0	2	0	0	2	2	4
WENHAM	3821	0	27	6	37	0	0	24	18	-10

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TABLE A-4A  
VITAL EVENTS BY COMMUNITY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS		MARRIAGES		RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :	TOTAL (2)	NEONATAL (2)	LICENSES : ISSUED : (3)	OCCURRENCE : (4)	
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49032	49034	28781
WEST BOYLSTON	6045	1	60	22	51	2	2	40	53	9
WEST BRIDGEWATER	6689	0	69	14	55	0	0	56	79	14
WEST BROOKFIELD	3357	0	45	51	43	1	1	19	43	2
WEST NEWBURY	3247	0	47	1	16	1	0	25	21	31
WEST SPRINGFIELD	26760	0	355	117	299	2	2	216	262	56
WEST STOCKBRIDGE	1292	0	17	0	6	0	0	10	16	11
WEST TISBURY	1275	1	30	6	13	0	0	27	40	17
WESTBOROUGH	13154	1	176	61	107	1	1	139	105	69
WESTFIELD	37525	4	506	451	315	5	4	318	393	191
WESTFORD	14777	0	223	26	79	1	1	78	70	144
WESTHAMPTON	1395	0	17	1	4	0	0	9	8	13
WESTMINSTER	5447	0	85	8	40	1	1	38	33	45
WESTON	10802	0	107	60	100	1	1	70	124	7
WESTPORT	14105	2	125	29	103	0	0	109	117	22
WESTWOOD	12432	3	137	22	114	0	0	81	98	23
WEYMOUTH	54707	1944	713	906	505	2	2	410	421	208
WHATELY	1373	0	15	2	7	0	0	9	10	8
WHITMAN	13835	0	222	22	89	2	1	105	100	133
WILBRAHAM	12255	1	119	48	85	0	0	84	80	34
WILLIAMSBURG	2491	0	32	4	14	0	0	16	29	18
WILLIAMSTOWN	8226	1	62	70	92	0	0	64	77	-30
WILMINGTON	17463	0	270	32	114	1	1	168	150	156
WINCHENDON	7820	0	151	23	84	1	0	61	54	67
WINCHESTER	19936	1606	234	363	207	1	0	143	204	27
WINDSOR	613	0	9	2	3	0	0	5	5	6
WINTHROP	18886	0	202	247	215	0	0	188	130	-13
WOBURN	37776	1	522	348	314	0	1	337	316	208
WORCESTER	156836	6348	2647	3177	1870	21	13	1518	1608	777
WORTHINGTON	1216	2	12	4	11	0	0	8	15	1
WRENTHAM	8933	0	125	49	65	0	0	32	67	60
YARMOUTH	20088	2	240	102	312	2	1	169	211	-72

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

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(3) MARRIAGE INTENTIONS MAY BE FILED IN ANY MASSACHUSETTS COMMUNITY, REGARDLESS OF WHERE THE BRIDE AND GROOM RESIDE OR WHERE THE MARRIAGE CEREMONY OCCURS.

(4) MARRIAGE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.

VITAL EVENTS BY COUNTY  
1987

COMMUNITY	POPULATION (1)	LIVE BIRTHS		DEATHS		INFANT DEATHS TOTAL : NEONATAL (2)		MARRIAGES (3)	DIVORCES (3)	RESIDENT NATURAL INCREASE
		OCCURRENCE :	RESIDENT :	OCCURRENCE :	RESIDENT :					
STATE TOTAL	5845118	86233	84343	56190	55562	608	432	49034	16994	28781
BARNSTABLE	173737	1844	2255	2110	2196	14	6	2062	448	59
BERKSHIRE	141700	1968	1732	1625	1545	9	7	1218	465	187
BRISTOL	488574	5591	6894	4256	4712	47	34	4085	1642	2182
DUKES	11071	180	187	98	122	0	0	254	60	65
ESSEX	644209	9446	9935	6140	6454	77	43	5807	2018	3481
FRANKLIN	66337	942	961	577	683	7	4	560	237	278
HAMPDEN	441426	7325	6763	4866	4627	51	41	3634	1475	2136
HAMPSHIRE	145543	1326	1493	878	1082	10	9	1093	357	411
MIDDLESEX	1366463	20839	18735	11419	12014	104	77	11250	3822	6721
NANTUCKET	5991	81	91	65	66	0	0	198	27	25
NORFOLK	604304	6093	7783	4754	5616	42	36	4887	1328	2167
PLYMOUTH	436218	2396	6675	3085	3577	39	27	3294	1516	3098
SUFFOLK	659115	18344	10691	9930	6535	127	89	5144	1206	4156
WORCESTER	660430	9858	10148	6387	6333	81	59	5548	2393	3815

(1) POPULATION DATA PROVIDED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

(2) INFANT AND NEONATAL DEATHS ARE INCLUDED IN TOTAL RESIDENT DEATHS.

(3) MARRIAGE AND DIVORCE FIGURES REFLECT OCCURRENCE, NOT RESIDENCE.



# NATALITY





## SECTION B

### NATALITY

A ten-year trend of increased births to Massachusetts residents continued in 1987. There were 84,343 live births to Massachusetts residents in 1987, a 2.6% increase over the 82,163 resident live births in 1986. Live births to Massachusetts residents include all births to Massachusetts residents, regardless of the state in which they occurred. Most data presented in this section are resident data. Table B-10 presents births by hospital of occurrence.

#### OCCURRENCE BIRTHS

In 1987, 86,233 births occurred in Massachusetts. All but 596 births occurred at the 58 hospitals with maternity units. The number of babies delivered at these hospitals ranged from 75 at Fairview Hospital in Great Barrington to 9,996 at Brigham and Women's Hospital in Boston. The median number of births per hospital was 1,098, a slight increase from the median number of 1,090 in 1986. The four hospitals with the largest number of births -- Brigham and Women's (9,996), Bay State Medical Center (5,864), Beth Israel (4,394) and St. Margaret's (3,381) represent slightly more than 28% of all births occurring in Massachusetts. The distribution of Massachusetts births by hospital size is presented below. These data have shown little change in the past several years.

#### 1987 DISTRIBUTION OF MASSACHUSETTS OCCURRENCE BIRTHS

NUMBER OF BIRTHS	NO. OF HOSPITALS IN CATEGORY	TOTAL NO. OF BIRTHS IN CATEGORY	% OF TOTAL BIRTH
<500	10	2,713	3.1
500-999	16	12,225	14.2
1000-1499	13	15,612	18.1
1500-1999	8	14,283	16.6
≥2000	11	40,804	47.3
ALL OTHER*		<u>596</u>	<u>0.7</u>
TOTAL	58	86,233	100.0

\*Includes all other hospitals, birthing centers, home births, and births occurring en route to a hospital.

#### HOME BIRTHS

What appears to be a growing public interest in home births is not reflected in the reported numbers: only 0.4% of births occurred at home. However, home births may be under-counted in the data presented. Home births, much more than hospital births, tend to be recorded as delayed records rather than reported at the time of birth. Delayed records are not included in these numbers.

#### BIRTHS BY RACE

The number of births by race of infant remained relatively constant, with over 79% of the births to Massachusetts residents being white. There are a number of points to keep in mind when analyzing 1987 data by race. Most important, 1987 was the first year in which the new birth certificate was utilized for

the entire year. However, 1.1% of the certificates received had no information on race. Another major problem occurred with the lack of precise data on Massachusetts' Hispanic population prior to June, 1986. The question as asked on the January-May 1986 birth certificate was limited to a race question. In many cases, individuals with an Hispanic ethnicity selected a race code rather than responding as Hispanic. If the response was Hispanic, however, these births were formerly included in the larger category of "white". The new birth certificate, introduced in June 1986, collects information on both race and ethnicity and provides improved data on Hispanics. Presented below are data for calendar year 1987 utilizing maternal race and ethnicity information:

**RACE AND ETHNICITY OF MOTHER  
JANUARY - DECEMBER, 1987**

<b>MATERNAL RACE/ETHNICITY</b>	<b>TOTAL BIRTHS</b>	<b>% OF TOTAL</b>
White non-Hispanic	69,053	81.9
Black non-Hispanic	6,034	7.2
Hispanic	5,623	6.7
Asian	2,498	3.0
Other	159	0.2
Unknown	<u>976</u>	<u>1.2</u>
<b>TOTAL</b>	<b>84,343</b>	<b>100.0*</b>

\*Percent does not sum to 100.0 due to rounding.

The final point which must be considered is the method used to present data by race. On the birth certificate, information is collected on mother's race and father's race. From these two items, a race for the infant is generated using standards set by the National Center for Health Statistics.

Depending on the use of the data, race data may be presented by race of infant or race of mother. If, for example, access to prenatal care is being analyzed, the information may be better presented by race of mother rather than race of infant. Although the differences in the numbers when comparing race of mother to race of infant are not substantial, the impact on rates may be significant because of the relatively small percentage of births to non-whites in Massachusetts.

On a birth certificate, if the race of one parent is unknown, the child is automatically assigned to the race of the parent whose race is known. On a death certificate, only the race of the infant is provided; therefore, using the race of mother generated from birth certificate data for the denominator will not provide consistent data. If, however, infant mortality rates are computed by race, the race of the infant must be used to provide consistent data.

### **TEEN BIRTHS**

The number of births to mothers between the ages of 15 and 19 increased from 6,754 births in 1986 to 6,923 births in 1987. However, the percent of teen births remained constant at 8.3%. The age-specific birth rate increased slightly from 30.1 to 32.0, because the population of females 15 to 19 years old decreased, thus decreasing the denominator of the rate.

## BIRTHS BY MARITAL STATUS

The proportion of unmarried mothers continued to increase to 20.8% of total births. More than 77.0% of the births to women under the age of 20 were out-of-wedlock births. Births to women under the age of 20 represent 8.3% of total births, but almost 31.0% of the births to unmarried mothers.

## BIRTHS BY AGE OF MOTHER

The actual numeric increases in births between the years 1986 and 1987 have been to older mothers as demonstrated below:

AGE OF MOTHER	DIFFERENCE IN BIRTHS 1986-1987	% CHANGE
<20	+168	+2.4
20-24	-213	-1.1
25-29	+214	+0.8
30-34	+1,215	+5.8
35-39	+573	+8.4
40-44	+246	+29.0
>44	-24	-42.1

## BIRTHS BY C-SECTION

The number of Caesarean section deliveries to Massachusetts residents continued to rise from 19,129 (revised) in 1986 to 19,918 in 1987. The rate per 1,000 live births also increased from 232.8 (revised) to 236.2. The lowest rate of C-sections (when the mother's age is known) was for mothers under the age of 15 (145.8 per 1,000 live births), and the highest was for women aged 40-44 (339.4). An important trend, however, is the increase to 259.2 in 1987 from 243.1 C-sections per 1,000 live births in 1986 for women aged 30-34.

## HOSPITAL PROFILES

The following is a synopsis of the data presented in Table B-10, Hospital Profiles, Massachusetts Occurrence Births:

**\*\*The percentage of Caesarean sections per hospital ranged from 14.8% to 35.8% of total births.**

**\*\*The highest percentage of low birthweight babies were born at St. Margaret's Hospital in Boston (14.2%), the lowest percentage at Providence Hospital in Holyoke (2.1%).**

**\*\*When comparing low birthweight infants by race per hospital, the ranges were: 1.8% to 18.7% white non-Hispanic; 2.6% to 20.5% black non-Hispanic; 1.9% to 14.3% Hispanic; and 2.4% to 18.7% Asian.**

**\*\*Based on total occurrence births, adequate prenatal care received by mothers per hospital ranged from 31.0% to 95.0%. When comparing prenatal care by race per hospital, white non-Hispanic mothers received 33.6% to 95.2% adequate care; black non-Hispanic mothers received 25.0% to 97.1% adequate care; Hispanic mothers received 21.7% to 92.1% adequate care; and Asian mothers received 18.2% to 100.0% adequate care.**

**\*\*The highest percent of mothers who breast fed their babies occurred at suburban hospitals: 77.1% of black non-Hispanic mothers at Newton-Wellesley Hospital in Newton to 92.3% of Hispanic mothers in Melrose-Wakefield Hospital in Melrose. The lowest percentages of breastfeeding mothers occurred at urban hospitals: 4.5% of Asian mothers in Charlton Memorial Hospital in Fall River to 25.5% of Hispanic mothers in St. Luke's Hospital in New Bedford.**

**\*\*The source of payment for delivery by private insurers (Blue Cross/Blue Shield, Health Maintenance Organizations, commercial insurers) also showed the highest percentages in two suburban hospitals: Newton-Wellesley and Melrose-Wakefield. The same source of payment showed the lowest percentages at two urban hospitals (Boston City Hospital in Boston and Providence Hospital in Holyoke) and one suburban hospital (Tobey Hospital in Wareham).**

## **LOW BIRTHWEIGHT BABIES**

The percent of low birthweight babies (less than 2,500 grams or five pounds eight ounces) increased slightly from 5.6% of total births in 1986 to 5.7% (4,846 births). The percent of low birthweight babies born to mothers under the age of 20 decreased from 8.7% to 8.0%.

## **HEALTH OBJECTIVES FOR 1990**

The U.S. Department of Health and Human Services has developed health objectives for 1990 in numerous areas (HEALTHY PEOPLE: Surgeon General's Report on Health Promotion and Disease Prevention; 1979). A good place to assess how Massachusetts is progressing may be measured with data obtained from 1987 birth certificates. For example, there are two objectives on low birthweight infants:

### **1990 OBJECTIVE:**

Low birthweight babies (less than 2,500 grams) should constitute not more than 5% of all live births.

No county or racial/ethnic group of the population should have a rate of low birthweight babies that exceeds 9% of all live births for that population.

### **MASSACHUSETTS--1987:**

4,846 births (or 5.7%) of less than 2,500 grams.

In 1987, every Massachusetts county met the 1990 objective:

<b>COUNTY</b>	<b>PERCENT OF LOW BIRTHWEIGHT BABIES</b>
BARNSTABLE	5.3
BERKSHIRE	6.0
BRISTOL	5.5
DUKES	6.4
ESSEX	5.0
FRANKLIN	4.8
HAMPDEN	6.4
HAMPSHIRE	4.4
MIDDLESEX	4.9
NANTUCKET	2.2
NORFOLK	4.9
PLYMOUTH	5.0
SUFFOLK	9.0
WORCESTER	5.8



There is a continuing problem with the objective by race. For 1987, the percentage of black non-Hispanic infants with a low birthweight was 12.3%:

RACE	PERCENT OF LOW BIRTHWEIGHT BABIES
White non-Hispanic	5.0
Black non-Hispanic	12.3
Hispanic	6.9
Asian	6.4
Other	5.7
Unknown	8.5

#### DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

##### ADEQUACY OF PRENATAL CARE

The Index of Adequacy of Prenatal Care (based on the Kessner Index) is a classification of prenatal care into five categories (adequate, intermediate, inadequate, no prenatal care, and unknown), based upon the trimester in which prenatal care begins and the number of prenatal visits. The general classification scheme is as follows:

CATEGORY	TRIMESTER CARE BEGAN	# OF VISITS
Adequate	1	9 or more
Intermediate	1	5 - 8
	2	5 or more
Inadequate	1	1 - 4
	2	1 - 4
	3	1 or more
No Prenatal Care	-	0
Unknown	unknown	unknown

This classification is adjusted for gestational age to allow for proper classification of premature birth.

##### BIRTHWEIGHT

The weight of an infant or fetus at the time of delivery. It may be recorded in either pounds/ounces or grams. If it is pounds/ounces, it is converted to grams for use in this report.

1 pound = 453.6 grams; 1,000 grams = 2 pounds, 3 ounces

##### BIRTHWEIGHT CATEGORIES

Normal birthweight (NBW): An infant's weight, recorded at birth, of 2,500 grams or more.

Low birthweight (LBW): An infant's weight, recorded at birth, of less than 2,500 grams.

Very low birthweight (VLBW): An infant's weight, recorded at birth, of less than 1,500 grams.

## CAESAREAN SECTION or C-SECTION

Primary: A mother's first occurrence of a Caesarean section delivery.

Repeat: A Caesarean delivery which has been preceded by at least one Caesarean delivery.

## ETHNICITY

See Race.

## INFANT

A child whose age is less than one year (365 days).

## LIVE BIRTH

A live birth is the complete expulsion or extraction from its mother of a product of conception, regardless of the duration of pregnancy, which, after separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

## LOW BIRTHWEIGHT

See Birthweight Categories.

## NEONATE

A child whose age is less than 28 days.

## NORMAL BIRTHWEIGHT

See Birthweight Categories.

## OCCURRENCE BIRTH

A birth occurring in the Commonwealth of Massachusetts, regardless of the residencies of the parents. In Massachusetts, the place will be one of the 351 cities or towns. See Resident Birth.

## PARITY

The number of live births, including the present birth.

## PRIMARY

See Caesarean Section.

## RACE

Race of Infant: For birth data presented in this publication, infant's race is derived from parent's race, according to written recommendation by the National Center for Health Statistics. (Race on a death certificate is determined by the certifier of the death.)

Race of mother: For data presented in this publication, mother's race is as reported by the infant's mother.



Race-ethnicity: Data on race-ethnicity are available starting in June 1986, using the new birth certificate implemented on June 1, 1986. This birth certificate includes separate questions on race and ethnicity of each parent. The categories are then assigned based on a cross classification of the 38 ethnicity and 6 race codes (White, Black, Asian Indian, other Asian, American Indian, and Other). The major impact of this modification is the more precise specification of Hispanic ethnicity, resulting in a decrease in births previously classified as births to white mothers and an increase in Hispanic births.

#### REPEAT

See Caesarean Section.

#### RESIDENT BIRTH

The usual place of residence as reported by the mother. An infant's residence is considered to be that of the mother. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented either in terms of residence or occurrence. Unless otherwise noted, all data in this publication are resident data. Resident data include all events which occur within the state, including those which occur to non-residents. There is an interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia which provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

#### VERY LOW BIRTHWEIGHT

See Birthweight Categories.

#### **RATES IMPORTANT FOR THIS SECTION INCLUDE:**

##### AGE-SPECIFIC BIRTH RATE

No. of Resident Live Births  
for a Specific Age of Mother x 1,000  
Total Female Population  
of That Specific Age

##### CRUDE BIRTH RATE

No. of Resident Live Births x 1,000  
Total Resident Population

##### GENERAL BIRTH RATE

No. of Resident Live Births x 1,000  
Total Female Population of  
Childbearing Age (15-44)



FIGURE B-1

Every day in 1987, residents of Massachusetts experienced an average of:



231

Births



13 Births Weighing  
<2500 Grams  
(Low Birthweight)



19 Births to Women  
Aged 15 through 19



23 Births to Women  
Aged 35 or Older



50 Births with less  
than adequate  
Prenatal Care



57 Births by  
Caesarean Section

TABLE B-1  
TRENDS IN NATALITY CHARACTERISTICS  
MASSACHUSETTS RESIDENTS  
1980-1987

	Year							
	1980	1981	1982	1983	1984	1985	1986	1987
Births*	72,591	73,930	75,749	76,031	78,197	81,781	82,163	84,343
Rate per 1,000 Women aged 15-44	53.4	54.1	55.1	48.1	56.2	58.5	58.4	59.6
Race of Infant								
White (#)	65,515	66,093	67,077	67,390	68,441	71,106	70,953	73,270
(%)	90.2	89.4	88.6	88.6	87.5	86.9	86.4	86.9
Black (#)	5,176	5,227	5,255	5,170	5,420	5,702	6,064	7,036
(%)	7.1	7.1	6.9	6.8	6.9	7.0	7.4	8.3
Other (#)	1,236	1,485	1,704	1,789	1,916	1,992	2,663	3,063
(%)	1.7	2.0	2.2	2.4	2.4	2.4	3.2	3.6
Unknown (#)	664	1,125	1,713	1,682	2,420	2,981	2,484	974
(%)	0.9	1.5	2.3	2.2	3.1	3.6	3.0	1.2
Teenage Births (#)	7,694	7,334	7,263	6,833	6,932	6,859	6,754	6,923
(Rate)	28.1	27.7	28.3	27.5	28.8	29.5	30.1	32.0
(per 1,000 females aged 15-19)								
Low Birthweight (#)**	4,413	4,428	4,447	4,461	4,597	4,751	4,642	4,846
(%)	6.1	6.0	5.9	5.9	5.9	5.8	5.6	5.7
Prenatal Care (% adequate)***	79.6	80.4	79.9	78.4	79.2	78.6	76.2	75.4

\*Differences in birth numbers and rates from prior publications are the result of updating of data files and modifications of population estimates and projections.

\*\*Low Birthweight: <2500 grams.

\*\*\*Percents are based on total number of births.

TABLE B-2  
AGE-SPECIFIC AND CRUDE BIRTH RATES\*  
MASSACHUSETTS RESIDENT BIRTHS  
1986-1987

Maternal Age	1986		1987		Percent Change
	<u>Births **</u> Population	Rate	<u>Births</u> Population	Rate	
13-14	<u>97</u> 75,654	1.3	<u>94</u> 73,216	1.3	0.0
15-19	<u>6,754</u> 224,407	30.1	<u>6,923</u> 216,225	32.0	+ 6.3
20-24	<u>18,652</u> 254,241	73.4	<u>18,438</u> 249,582	73.9	+ 0.7
25-29	<u>28,115</u> 264,045	106.5	<u>28,331</u> 266,417	106.3	- 0.2
30-34	<u>20,743</u> 257,195	80.7	<u>21,956</u> 261,952	83.8	+ 3.8
35-39	<u>6,832</u> 214,832	31.8	<u>7,405</u> 220,812	33.5	+ 5.3
40-44	<u>847</u> 189,444	4.5	<u>1,093</u> 197,057	5.5	+22.2
Age-specific Birth Rate,+ ages 15-44	<u>81,943</u> 1,404,164	58.4	<u>84,146</u> 1,412,045	59.6	+ 2.0
Crude Birth Rate,++ per 1,000 residents	<u>82,163</u> 5,829,504	14.1	<u>84,343</u> 5,845,118	14.4	+ 2.1

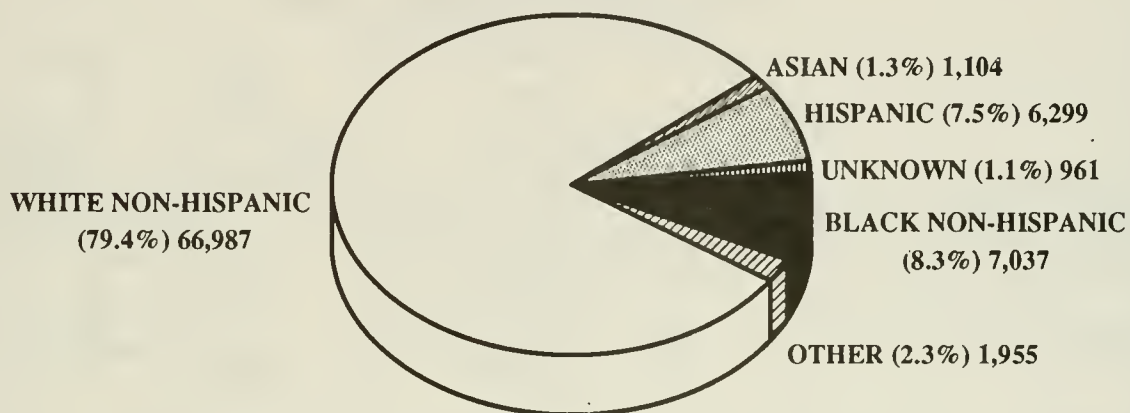
\*Differences in the rates from prior publications are the result of modifications of population estimates.

\*\*Population data are interpolations of the 1980 U.S. Bureau of the Census counts and the 1990 MISER projections.

+Births per 1,000 females aged 15-44.

++Births per 1,000 residents.

**FIGURE B-2**  
**RESIDENT LIVE BIRTHS BY RACE OF INFANT\***  
**1987**



\*Percents do not sum to 100.0 due to rounding.

**FIGURE B-3**  
**RESIDENT LIVE BIRTHS BY MOTHER'S AGE**  
**1987**

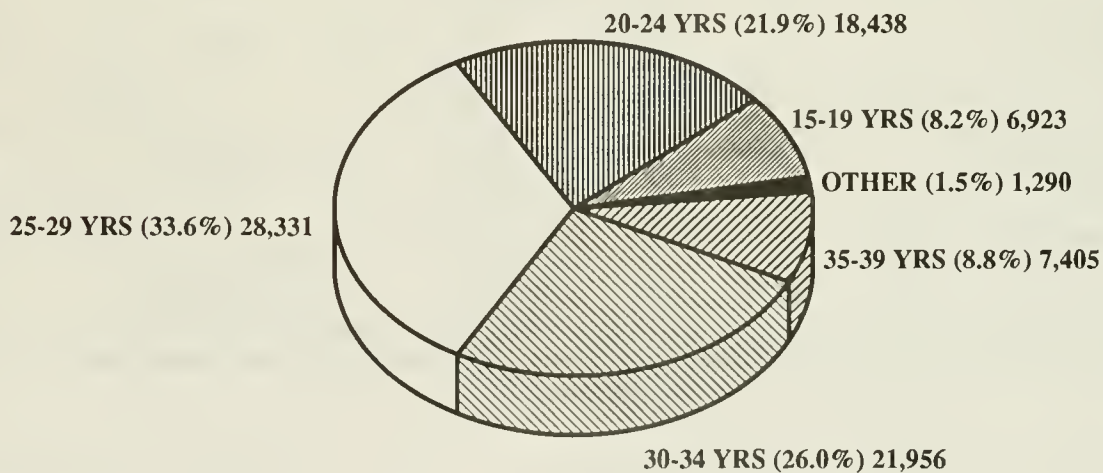




TABLE B-3  
BIRTHS BY MOTHER'S AGE, RACE AND MARITAL STATUS  
MASSACHUSETTS RESIDENT BIRTHS  
1987

Age of Mother	Total			White non-Hispanic			Black non-Hispanic			Hispanic			Asian			Other			Unknown		
	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed	Total	Wed	Unwed
Total*	84,343	66,683	17,588	69,053	58,777	10,233	6,034	2,467	3,563	5,623	2,603	3,020	2,498	2,090	407	159	74	80	976	672	285
Under 15	96	2	94	24	0	24	34	1	33	28	1	27	6	0	6	0	0	0	4	0	4
15	327	22	305	154	13	141	79	1	78	81	8	73	5	0	5	2	0	2	6	0	6
16	796	59	735	416	35	380	153	6	147	187	14	173	19	4	15	3	0	3	18	0	17
17	1,337	184	1,153	798	126	672	226	13	213	251	34	217	38	9	29	8	0	8	16	2	14
18	1,965	451	1,510	1,337	365	969	255	14	240	298	59	239	39	6	33	8	0	8	28	7	21
19	2,498	865	1,631	1,722	706	1,015	326	43	283	357	90	267	56	19	37	12	1	10	25	6	19
20-24	18,439	12,094	6,328	13,887	10,152	3,723	1,827	528	1,299	2,006	919	1,087	465	343	122	36	13	21	218	139	76
25-29	28,329	24,809	3,496	24,127	22,123	1,989	1,641	880	759	1,372	794	578	825	747	77	54	35	19	310	230	74
30-34	21,958	20,289	1,655	19,239	18,295	937	1,041	678	362	699	438	261	711	664	47	24	16	6	244	198	42
35-39	7,405	6,860	536	6,374	6,071	299	365	241	124	281	206	75	285	256	29	9	7	2	91	79	7
40-44	1,093	969	124	903	826	77	79	58	21	52	35	17	44	38	6	2	1	1	13	11	2
45+	33	28	5	21	20	1	5	3	2	3	2	1	4	3	1	0	0	0	0	0	0
Unknown	67	51	16	51	45	6	3	1	2	8	3	5	1	1	0	1	1	0	3	0	3

\*Total includes 72 records with unknown marital status.

TABLE B-4  
RESIDENT BIRTHS TO TEENAGE MOTHERS  
1970-1987

YEAR	TOTAL BIRTHS	AGE OF MOTHER									% OF TOTAL BIRTHS
		12	13	14	15	16	17	18	19	TOTAL 12-19	
1970	93,582	3	8	70	320	802	1,726	3,043	4,285	10,257	11.0
1971	86,755	3	23	84	313	875	1,738	2,981	4,000	10,017	11.5
1972	76,835	1	20	103	348	955	1,841	2,834	3,690	9,792	12.7
1973	72,237	0	12	93	393	959	1,759	2,584	3,282	9,082	12.6
1974	70,071	2	16	79	333	895	1,762	2,524	3,181	8,792	12.5
1975	68,070	2	18	84	325	915	1,678	2,560	3,085	8,667	12.7
1976	65,947	7	12	96	336	807	1,478	2,332	2,923	7,991	12.1
1977	67,838	1	18	68	270	792	1,477	2,293	2,913	7,832	11.5
1978	68,526	3	15	67	303	737	1,445	2,252	2,979	7,801	11.4
1979	70,568	2	9	70	283	773	1,413	2,306	2,916	7,772	11.0
1980	72,591	1	14	56	300	740	1,360	2,202	3,092	7,765	10.7
1981	73,931	1	12	82	275	722	1,357	2,164	2,816	7,429	10.0
1982	75,749	1	14	83	299	753	1,328	2,161	2,722	7,361	9.7
1983	76,031	0	8	78	255	726	1,278	2,053	2,521	6,919	9.1
1984	78,198	1	8	75	265	714	1,307	2,061	2,585	7,016	9.0
1985	81,776	4	12	97	295	698	1,283	1,986	2,595	6,970	8.5
1986	82,163	0	15	82	334	712	1,233	1,954	2,521	6,851	8.3
1987	84,343	2	15	79	327	796	1,337	1,965	2,498	7,019	8.3

TABLE B-5  
BIRTHS BY BIRTHWEIGHT, MATERNAL RACE AND ETHNICITY  
MASSACHUSETTS RESIDENT BIRTHS  
1987

Birthweight (in grams)	Total		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other		Unknown	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
STATE TOTAL	84,343	100.0	69,053	100.0	6,034	100.0	5,623	100.0	2,498	100.0	159	100.0	976	100.0
< 500	93	0.1	61	0.1	17	0.3	11	0.2	0	**	0	**	4	**
500 - 999	318	0.4	221	0.3	64	1.1	20	0.4	5	0.2	1	**	7	0.7
1,000-1,499	395	0.5	290	0.4	63	1.0	22	0.4	12	0.5	1	**	7	0.7
VLBW*(0-1,499)	806	1.0	572	0.8	144	2.4	53	0.9	17	0.7	2	**	18	1.8
1,500-1,999	891	1.1	643	0.9	123	2.0	82	1.5	20	0.8	3	**	20	2.1
2,000-2,499	3,150	3.7	2,251	3.3	475	7.9	254	4.5	122	4.9	4	**	44	4.5
LBW*+(0-2,499)	4,847	5.7	3,466	5.0	742	12.3	389	6.9	159	6.4	9	5.7	82	8.4
2,500-2,999	12,289	14.6	9,139	13.2	1,330	22.0	1,087	19.3	572	22.9	26	16.4	135	13.8
3,000-3,499	29,754	35.3	23,888	34.6	2,217	36.7	2,204	39.2	1,065	42.6	56	35.2	324	33.2
3,500-3,999	26,282	31.2	22,679	32.8	1,301	21.6	1,480	26.3	521	20.9	50	31.4	251	25.7
4,000-4,499	8,875	10.5	7,902	11.4	342	5.7	379	6.7	136	5.4	16	10.1	100	10.3
4,500-4,999	1,695	2.0	1,545	2.2	53	0.9	58	1.0	18	0.7	2	**	19	1.9
5,000+	211	0.3	187	0.3	14	0.2	6	0.1	1	**	0	**	3	**
Unknown	390	0.5	247	0.4	35	0.6	20	0.4	26	1.0	0	**	62	6.4

\*\*Calculations based on fewer than 5 events are excluded.

\*VLBW: very low birthweight

\*\*+LBW: low birthweight

TABLE B-6  
NATALITY CHARACTERISTICS BY MATERNAL RACE AND ETHNICITY  
MASSACHUSETTS RESIDENT BIRTHS  
1987

Maternal Race and Ethnicity	Total Births	Teenage Births		Birthweight*		Adequate Prenatal Care+	First Trimester Prenatal Care++	Prenatal Care Visits
	Number	<18 yrs %	<20 yrs %	Very Low %	Low %	%	%	Average Number
STATE TOTAL	84,343	3.0	8.3	1.0	5.7	78.2	80.8	11.5
WHITE NON-HISPANIC	69,053	2.0	6.4	0.8	5.0	81.6	84.4	11.7
BLACK NON-HISPANIC	6,034	8.2	17.8	2.4	12.3	59.9	61.5	10.2
Haitian	742	0.8	2.6	2.0	8.5	59.7	60.1	10.6
Other Black non-Hispanic	5,292	9.2	19.9	2.4	12.8	60.0	61.7	10.2
HISPANIC	5,623	9.7	21.4	0.9	6.9	61.1	66.8	10.4
Puerto Rican	3,459	13.3	27.8	1.0	7.8	58.6	63.7	10.3
Dominican	707	4.8	11.3	1.0	5.7	60.2	75.0	10.2
Central American	518	2.7	9.8	**	6.0	66.5	68.9	10.6
Other Hispanic	939	4.3	11.6	1.0	5.0	68.6	70.9	11.0
ASIAN	2,498	2.7	6.5	0.7	6.4	67.6	69.0	10.8
Southeast Asian	831	5.8	13.0	0.7	7.8	46.9	48.6	9.5
Chinese	722	**	1.0	**	4.2	80.5	80.0	11.6
Other Asian	945	2.0	5.1	0.7	6.8	75.4	78.4	11.2
OTHER	159	8.2	20.8	**	5.7	58.7	69.8	9.9
UNKNOWN	976	4.5	9.9	1.8	8.4	75.5	59.5	11.4

\*Very low birthweight: <1,500 grams.  
Low birthweight: <2,500 grams.

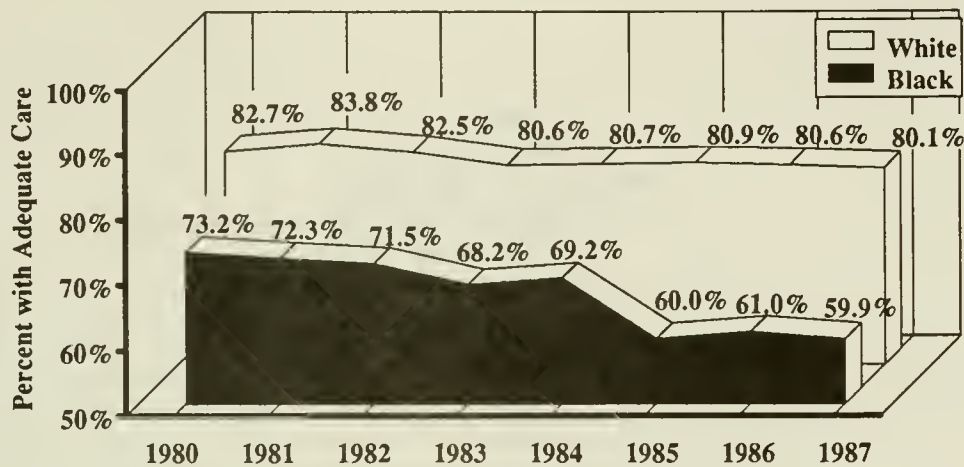
\*\*Calculations based on fewer than 5 events are excluded.

+Calculations are based on births with known adequacy of prenatal care scores.

++Mothers who registered for prenatal care during the first trimester and had nine or more prenatal care visits.

FIGURE B-4

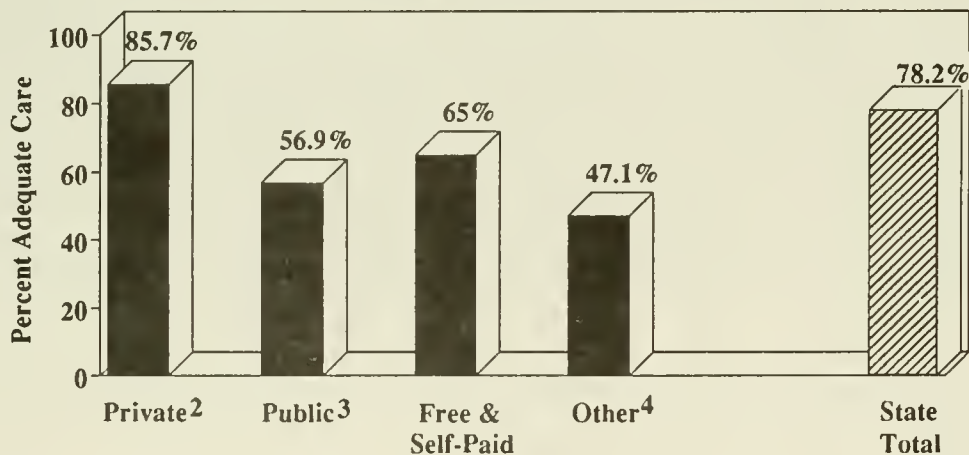
# **TRENDS IN ADEQUACY OF PRENATAL CARE <sup>1</sup>** **by Maternal Race <sup>2</sup>** **Massachusetts: 1980-1987**



1. Calculations are based on births with known adequacy of prenatal care scores.
2. When calculating statistics which include data before June 1986, the race classifications do not include an ethnicity component; most Hispanics are included in the race category of white.

FIGURE B-5

# **ADEQUACY OF PRENATAL CARE <sup>1</sup>** **by Prenatal Care Source of Payment <sup>1</sup>** **Massachusetts: 1987**



1. The source of payment for prenatal care is a self-reported item on the birth certificate. As with all such data, they are subject to the limitations of self-reported information and should be interpreted with the usual caution.
2. Private: Blue Cross/Blue Shield, Commercial Insurers and Health Maintenance Organizations.
3. Public: Medicaid, Medicare, Healthy Start and Other Government.
4. Other: Worker's Compensation and Other.

TABLE B-7  
PARITY\* BY AGE OF MOTHER  
MASSACHUSETTS RESIDENT BIRTHS  
1987

Age of Mother		Total	1st	2nd	3rd	4th	5th	6th	7th	8th	≥9th	Unknown
Total	N %	84,343 100.00	37,722 44.72	27,228 32.28	11,922 14.14	3,919 4.65	1,184 1.40	431 0.51	196 0.23	71 0.08	32 0.04	1,638 1.94
10-14	N %	96 0.11	85 0.10	3 **	1 **	--	--	--	--	--	--	7 0.01
15-19	N %	6,923 8.21	5,511 6.53	1,051 1.25	183 0.22	35 0.04	5 0.01	1 **	--	--	--	137 0.16
20-24	N %	18,438 21.86	9,976 11.83	5,655 6.70	1,844 2.19	485 0.58	104 0.12	16 0.02	3 **	--	--	355 0.42
25-29	N %	28,331 33.59	12,575 14.91	9,647 11.44	3,925 4.65	1,169 1.39	328 0.39	99 0.12	33 0.04	11 0.01	1 **	543 0.64
30-34	N %	21,956 26.03	7,250 8.59	8,101 9.60	4,135 4.90	1,397 1.66	422 0.50	155 0.18	65 0.08	20 0.02	5 0.01	406 0.48
35-39	N %	7,405 8.78	2,018 2.39	2,460 2.92	1,618 1.92	689 0.82	257 0.30	107 0.13	64 0.08	27 0.03	17 0.02	148 0.18
40-44	N %	1,093 1.29	269 0.32	280 0.33	206 0.24	139 0.16	66 0.08	47 0.06	30 0.04	11 0.01	7 0.01	38 0.04
≥45	N %	33 0.04	8 0.01	5 0.01	4 **	3 **	2 **	5 0.01	1 **	2 **	2 **	1 **
Unknown Age	N %	68 0.08	30 0.04	26 0.03	6 0.01	2 **	--	1 **	--	--	--	3 **

\*The number of live births including this birth.

\*\*Percentage less than 0.01%.



TABLE B-8  
NUMBER OF PRIMARY AND REPEAT CAESAREAN SECTIONS BY AGE  
MASSACHUSETTS RESIDENT BIRTHS  
1987

Age of Mother	Total Caesarean Deliveries	Total Births	Rate per 1,000 Live Births	Primary Caesarean Deliveries	Percent of Total Caesarean	Repeat Caesarean Deliveries	Percent of Total Caesarean
Total	19,918	84,343	236.2	12,465	62.6%	7,453	37.4%
<15	14	96	145.8	14	100.0	--	--
15-19	1,124	6,923	162.4	972	86.5	152	13.5
20-24	3,936	18,438	213.5	2,724	69.2	1,212	30.8
25-29	6,746	28,331	238.1	4,303	63.8	2,443	36.2
30-34	5,692	21,956	259.2	3,099	54.4	2,593	45.6
35-39	2,017	7,405	272.4	1,110	55.0	907	45.0
40-44	371	1,093	339.4	229	61.7	142	38.3
≥45	11	33	333.3	10	90.9	1	9.1
Unknown	7	68	102.9	4	57.1	3	42.9

TABLE B-9  
BIRTHWEIGHT IN GRAMS BY AGE OF MOTHER  
NUMBER AND RATE PER THOUSAND LIVE BIRTHS  
MASSACHUSETTS RESIDENT BIRTHS  
1987

Birthweight (in grams)		Total	<15	15	16	17	18	19	20-24	25-29	30-34	35-39	40-44	≥45	Unknown
Total	#	84,343	96	327	796	1,337	1,965	2,498	18,438	28,331	21,956	7,405	1,093	33	68
<500	#	94	--	2	1	2	2	3	20	24	29	9	2	--	--
	Rate	1.1	--	6.1	1.2	1.5	1.0	1.2	1.1	0.8	1.3	1.2	1.8	--	--
500-999	#	318	--	1	4	9	11	14	80	100	73	24	2	--	--
	Rate	3.8	--	3.1	5.0	6.7	5.6	5.6	4.3	3.5	3.3	3.2	1.8	--	--
1000-1499	#	395	--	3	5	14	16	14	86	123	91	34	9	--	--
	Rate	4.7	--	9.2	6.3	10.5	8.1	5.6	4.7	4.3	4.1	4.6	8.2	--	--
VLBW*	#	807	--	6	10	25	29	31	186	247	193	67	13	--	--
	Rate	9.6	--	18.3	12.6	18.7	14.8	12.4	10.1	8.7	8.8	9.1	11.9	--	--
1500-1999	#	891	2	12	12	19	24	37	204	281	208	78	13	--	1
	Rate	10.6	20.8	36.7	15.1	14.2	12.2	14.8	11.1	9.9	9.5	10.5	11.9	--	14.7
2000-2499	#	3,149	8	15	41	68	84	137	781	983	731	246	51	2	2
	Rate	37.3	83.3	45.9	51.5	50.9	42.7	54.8	42.4	34.7	33.3	33.2	46.7	60.6	29.4
LBW**	#	4,847	10	33	63	112	137	205	1,176	1,511	1,132	391	77	2	3
	Rate	57.5	104.2	100.9	79.1	83.8	69.7	82.1	63.8	53.3	51.6	52.8	70.4	60.6	44.1
2500-2999	#	12,289	23	68	145	267	399	439	3,032	3,892	2,872	982	153	6	11
	Rate	145.7	239.6	208.0	182.2	199.7	203.1	175.7	164.4	137.4	130.8	132.6	140.0	181.8	161.8
3000-3499	#	29,748	44	132	322	532	761	949	6,850	10,000	7,369	2,400	355	9	25
	Rate	352.7	458.3	403.7	404.5	397.9	387.3	379.9	371.5	353.0	335.6	324.1	324.8	272.7	367.6
3500-3999	#	26,276	17	76	210	333	491	686	5,375	9,031	7,253	2,435	334	12	23
	Rate	311.5	177.1	232.4	263.8	249.1	249.9	274.6	291.5	318.8	330.3	328.8	305.6	363.6	338.2
4000-4499	#	8,872	2	15	38	75	151	174	1,584	3,122	2,635	931	137	3	5
	Rate	105.2	20.8	45.9	47.7	56.1	76.8	69.6	85.9	110.2	120.0	125.7	125.3	90.9	73.5
4500-4999	#	1,695	--	--	10	13	18	34	313	586	509	184	27	--	1
	Rate	20.1	--	--	12.6	9.7	9.2	13.6	17.0	20.7	23.2	24.8	24.7	--	14.7
5000-8164	#	211	--	1	1	1	--	3	39	62	75	25	4	--	--
	Rate	2.5	--	3.1	1.2	0.7	--	1.2	2.1	2.2	3.4	3.4	3.6	--	--
Unknown***	#	405	--	2	7	4	8	8	74	127	111	57	6	1	--
	Rate	4.8	--	6.1	8.8	3.0	4.1	3.2	4.0	4.5	5.1	7.7	5.5	30.3	--

\*VLBW--very low birthweight (0-1499 grams)

\*\*LBW--low birthweight (0-2499 grams)

\*\*\*Unknown includes birthweights greater than 8164 grams.

# TECHNICAL NOTES FOR TABLE B-10 HOSPITAL PROFILES MASSACHUSETTS OCCURRENCE BIRTHS 1987

This table was compiled to provide an overview of the 58 birthing hospitals within the Commonwealth on an individual basis. The figures in the "Occurrence Births" column for each hospital indicate the total number of births that occurred on a hospital-by-hospital basis. Percents shown in this column indicate the percentage of the total Massachusetts births occurring at each hospital.

Each race category within an individual hospital should be regarded as a separate entity. Example: Bay State Medical Center had 5,864 occurrence births in 1987. Of these, 72.2% were to white, non-Hispanic women, 11.8% were to black, non-Hispanic women, 14.1% were to Hispanic women, and so forth. When considering methods of delivery at Bay State Medical Center, of the 72.2% of births to white, non-Hispanic mothers, 27.2% of these babies were delivered by Caesarean Section (706 primary C-Section deliveries and 443 repeat C-Section deliveries).

The percent of low birthweight (less than 2,500 grams) babies born to white, non-Hispanic mothers was 7.2%, while 78.5% of white, non-Hispanic mothers at Bay State Medical Center received adequate prenatal care. The adequacy of prenatal care is based on two factors: the month a woman registers for prenatal care and the total number of visits for prenatal care. Please refer to the definitions at the beginning of this section for further explanation.

## Additional Notes:

\*\*Calculations based on 15 or fewer Caesarean-section births per race category are indicated by "\*\*\*" in the three Method of Delivery columns.

\*\*Calculations based on fewer than 10 births per race category are indicated by "\*\*\*\*" across the entire row. In these cases, only the percent of births by race of mother is shown.

\*\*Percents may not sum to 100.0 due to rounding.

\*\*Zero events are indicated by dashes.

TABLE B-10  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
				Caesarean						% Private	% Government Assistance	% Self Paid	% Free & Other	% Unknown
				% Total	# Primary	# Repeat								
Addison Gilbert	Gloucester	308 0.4%	TOTAL	29.2%	65	25	3.6%	69.8%	49.4%	68.8%	27.6%	2.3%	1.3%	--
			White, non-Hisp.	28.8	61	25	3.0	70.2	48.8	69.2	27.4	2.0	1.3	--
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--
Unknown	--	--	--	--	--	--	--	--	--	--	--	--		
Anna Jaques	Newburyport	860 1.0%	TOTAL	21.5%	108	77	3.6%	82.1%	58.5%	79.1%	14.4%	4.4%	1.7%	0.3%
			White, non-Hisp.	21.5	106	74	3.6	82.0	58.4	79.1	14.4	4.5	1.7	0.2
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	8.3	83.3	66.7	66.7	25.0	--	8.3	--
			Asian	**	**	**	**	**	**	**	**	**	**	**
			Other	**	**	**	**	**	**	**	**	**	**	**
Unknown	--	--	--	--	--	--	--	--	--	--	--	--		
Atlanticare Medical Center	Lynn	908 1.0%	TOTAL	24.4%	123	98	3.6%	73.3%	35.2%	59.0%	37.0%	2.3%	1.5%	0.1%
			White, non-Hisp.	26.3	105	84	2.9	79.2	35.2	68.4	27.2	2.5	1.9	--
			Black, non-Hisp.	**	**	**	10.0	50.0	28.3	30.0	68.3	1.7	--	--
			Hispanic	**	**	**	3.2	50.8	58.7	22.2	74.6	3.2	--	--
			Asian	**	**	**	5.2	53.4	20.7	17.2	81.0	--	--	1.7
			Other	**	**	**	**	**	**	**	**	**	**	**
Unknown	--	--	--	--	--	--	--	--	--	--	--	--		
Bay State Medical Center	Springfield	5,864 6.8%	TOTAL	25.8%	886	626	8.4%	72.5%	48.9%	63.7%	33.2%	2.5%	0.5%	0.2%
			White, non-Hisp.	27.2	706	443	7.2	78.5	55.0	78.0	18.9	2.7	0.2	0.2
			Black, non-Hisp.	23.2	88	72	12.2	56.2	30.0	31.0	66.4	2.3	0.3	--
			Hispanic	21.1	80	95	10.9	56.9	33.9	19.3	79.0	1.4	0.2	--
			Asian	**	**	**	8.6	55.2	62.1	63.8	25.9	8.6	1.7	--
			Other	32.7	7	10	15.4	61.5	21.2	38.5	26.9	--	28.8	5.8
Unknown	**	**	**	**	**	**	**	**	**	**	**	**		
Berkshire Medical Center	Pittsfield	1,428 1.7%	TOTAL	23.2%	198	134	5.6%	74.6%	60.1%	77.4%	17.7%	3.5%	1.1%	0.4%
			White, non-Hisp.	23.1	190	128	5.7	75.5	60.3	78.5	16.7	3.6	1.0	0.2
			Black, non-Hisp.	**	**	**	**	33.3	29.2	25.0	75.0	--	--	--
			Hispanic	**	**	**	7.7	61.5	61.5	76.9	15.4	7.7	--	--
			Asian	**	**	**	**	**	**	**	**	**	**	**
			Other	**	**	**	**	**	**	**	**	**	**	**
Unknown	--	--	--	--	--	--	--	--	--	--	--	--		
Beth Israel	Boston	4,394 5.1%	TOTAL	22.5%	675	301	5.8%	67.7%	63.6%	75.6%	17.2%	1.0%	1.0%	5.2%
			White, non-Hisp.	22.6	474	204	4.5	74.4	71.2	87.4	6.8	0.7	0.8	4.4
			Black, non-Hisp.	22.7	98	46	12.8	45.3	49.7	43.4	47.5	1.6	1.2	6.2
			Hispanic	24.6	31	14	6.0	53.6	66.1	62.8	29.0	1.1	2.7	4.4
			Asian	20.1	51	24	2.6	68.0	29.1	53.2	38.1	2.1	0.8	5.8
			Other	**	**	**	9.6	48.1	73.1	51.9	40.4	--	3.8	3.8
Unknown	22.4	12	10	10.2	45.4	41.7	45.4	26.9	3.7	2.8	21.3			



Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment					
				Caesarean						% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown	
				% Total	# Primary	# Repeat									
Beverly	Beverly	1,257 1.5%	TOTAL	22.1%	175	102	2.4%	88.3%	69.8%	89.5%	7.6%	1.7%	1.2%	0.1%	
			White, non-Hisp.	21.9	166	100	2.5	88.6	69.4	89.8	7.3	1.6	1.2	0.1	
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	73.7	84.2	68.4	21.1	5.3	5.3	5.3	--
			Asian	**	**	**	**	100.0	84.6	92.3	7.7	--	**	**	--
Boston City	Boston	1,726 2.0%	TOTAL	21.8%	264	110	12.1%	31.4%	47.5%	16.8%	74.5%	8.2%	0.2%	0.2%	
			White, non-Hisp.	25.5	37	24	18.7	33.6	29.9	23.7	68.9	6.2	0.8	0.4	
			Black, non-Hisp.	22.2	180	72	11.6	30.2	47.1	15.7	75.7	8.4	0.2	0.1	
			Hispanic	18.2	42	14	9.4	35.3	63.8	16.2	73.8	10.0	--	--	
			Asian	**	**	**	3.6	21.4	35.7	10.7	89.3	--	--	--	
Brigham and Women's	Boston	9,996 11.6%	TOTAL	26.5%	1,396	754	9.7%	92.2%	70.8%	80.3%	14.3%	3.9%	0.6%	1.0%	
			White, non-Hisp.	27.3	1,018	558	8.8	95.2	74.4	90.2	5.1	3.3	0.5	0.9	
			Black, non-Hisp.	24.2	192	98	14.7	82.0	52.6	61.4	33.2	3.7	0.6	1.1	
			Hispanic	26.5	127	80	8.2	87.3	68.6	34.8	57.5	7.1	0.3	0.3	
			Asian	20.8	53	11	7.5	95.4	83.6	85.3	6.2	7.5	0.8	0.3	
Brockton	Brockton	1,201 1.4%	TOTAL	19.9%	146	93	4.0%	57.9%	39.7%	73.5%	22.5%	2.8%	0.2%	0.9%	
			White, non-Hisp.	19.4	127	83	3.5	60.0	41.2	76.9	19.4	2.9	0.3	0.6	
			Black, non-Hisp.	**	**	**	8.2	42.6	23.0	37.7	59.0	3.3	--	--	8.7
			Hispanic	**	**	**	8.7	21.7	26.1	26.1	60.9	4.3	--	--	--
			Asian	**	**	**	11.8	41.2	41.2	82.4	17.6	--	--	--	21.4
Burbank	Fitchburg	1,031 1.2%	TOTAL	15.4%	109	50	2.5%	48.6%	54.0%	62.0%	32.5%	2.0%	2.2%	1.3%	
			White, non-Hisp.	15.5	96	44	2.4	49.3	55.8	67.0	27.1	2.2	2.4	1.3	
			Black, non-Hisp.	**	**	**	2.9	41.2	26.5	20.6	79.4	--	--	--	--
			Hispanic	**	**	**	4.4	44.1	47.1	26.5	70.6	1.5	1.5	--	--
			Asian	**	**	**	**	42.1	47.4	31.6	68.4	--	--	--	--
Cambridge City	Cambridge	526 0.6%	TOTAL	18.7%	63	35	5.9%	31.0%	42.4%	38.4%	51.9%	6.1%	2.7%	1.0%	
			White, non-Hisp.	22.6	39	21	6.0	35.6	30.3	53.6	38.6	4.1	2.6	1.1	
			Black, non-Hisp.	19.8	9	7	8.6	30.9	64.2	22.2	61.7	12.3	3.7	--	--
			Hispanic	**	**	**	5.2	26.0	70.8	27.1	63.5	5.2	2.1	2.1	--
			Asian	**	**	**	4.3	20.0	25.7	15.7	74.3	7.1	2.9	--	--
			TOTAL	**	**	**	**	33.3	33.3	33.3	--	--	--	--	
			White, non-Hisp.	--	--	--	--	--	--	--	--	--	--	--	--
			Black, non-Hisp.	--	--	--	--	--	--	--	--	--	--	--	--
			Hispanic	--	--	--	--	--	--	--	--	--	--	--	--
			Asian	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 8-10, continued  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment			
				Caesarean						% Private	% Government Assistance	% Free & Self Paid	% Other
				% Total	# Primary	# Repeat							
Cape Cod	Barnstable	1,297 1.5%	TOTAL	28.5%	238	131	3.5%	71.5%	51.1%	68.2%	22.0%	8.9%	0.5%
			White, non-Hisp.	28.4	229	121	3.5	72.6	51.3	70.0	19.9	9.1	0.5
			Black, non-Hisp.	**	**	**	**	25.0	31.2	18.7	75.0	6.2	--
			Hispanic	**	**	**	10.0	50.0	65.0	20.0	75.0	5.0	--
			Asian	**	**	**	**	72.7	72.7	81.8	9.1	6.7	--
			Other	**	**	**	6.7	66.7	26.7	20.0	73.3	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--
Charlton Memorial	Fall River	1,891 2.2%	TOTAL	22.5%	259	167	5.0%	67.2%	13.0%	66.7%	29.5%	2.5%	1.0%
			White, non-Hisp.	22.6	254	164	5.0	67.7	12.9	67.5	28.6	2.6	1.0
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	9.1	18.2	4.5	27.3	72.7	--	--
			Other	**	**	**	**	**	**	**	**	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--
Cooley Dickinson	Northampton	1,060 1.2%	TOTAL	24.9%	182	82	2.4%	83.0%	72.0%	77.0%	12.5%	2.0%	0.7%
			White, non-Hisp.	24.5	164	71	2.0	85.2	72.1	78.7	10.3	2.1	0.7
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**
			Hispanic	34.7	10	7	2.0	59.2	61.2	38.8	53.1	2.0	--
			Asian	**	**	**	10.0	70.0	80.0	82.5	12.5	--	--
			Other	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--
Emerson	Concord	1,869 2.2%	TOTAL	21.8	236	171	2.8%	91.2%	74.6%	86.1%	12.6%	1.2%	0.1%
			White, non-Hisp.	21.5	217	156	2.6	92.2	75.6	88.3	10.5	1.2	0.1
			Black, non-Hisp.	**	**	**	8.8	76.5	61.8	38.2	61.8	--	--
			Hispanic	**	**	**	5.7	82.9	57.1	40.0	54.3	5.7	--
			Asian	**	**	**	3.5	78.9	68.4	80.7	19.3	--	--
			Other	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--
Fairview	Great Barrington	75 0.1%	TOTAL	30.7	13	10	10.7%	86.7%	58.7%	88.0%	4.0%	8.0%	--
			White, non-Hisp.	31.1	13	10	10.8	86.5	58.1	87.8	4.1	8.1	--
			Black, non-Hisp.	--	--	--	--	--	--	--	--	--	--
			Hispanic	**	**	**	**	**	**	**	**	**	**
			Asian	--	--	--	--	--	--	--	--	--	--
			Other	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--
Falmouth	Falmouth	533 0.6%	TOTAL	29.3%	95	61	4.1%	60.4%	60.4%	53.7%	36.6%	4.5%	1.5%
			White, non-Hisp.	29.0	86	51	4.0	61.7	61.9	57.6	33.7	4.9	0.6
			Black, non-Hisp.	**	**	**	7.7	53.8	61.5	23.1	69.2	--	7.7
			Hispanic	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	**	**	**	**	**	**	**
			Other	**	**	**	3.6	46.4	35.7	14.3	64.3	3.6	3.6
			Unknown	**	**	**	**	**	**	**	**	**	**



Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment					
				Caesarean						% Private	% Government Assistance	% Self Paid	% Other	% Unknown	
				% Total	# Primary	# Repeat									
Framingham Union	Framingham	2,140 2.5%	TOTAL	25.5%	345	199	3.9%	91.4%	52.6%	85.8%	8.9%	2.6%	0.3%	2.4%	
			White, non-Hisp.	25.2	308	178	3.7	92.1	54.2	87.7	7.6	2.4	0.2	2.1	
			Black, non-Hisp.	**	**	**	14.8	77.8	40.7	59.3	33.3	7.4	--	--	
			Hispanic	2.2	**	**	2.1	87.2	31.9	61.7	29.8	8.5	--	--	
			Asian	1.2	**	**	4.0	96.0	76.0	96.0	--	--	--	4.0	
			Other	2.9	32.8	7	8.2	83.6	27.9	62.3	18.0	3.3	3.3	13.1	
Unknown	2.0	**	**	2.4	85.7	28.6	69.0	23.8	--	--	2.4	4.8			
Franklin Medical Center	Greenfield	926 1.1%	TOTAL	19.4%	100	80	3.2%	78.4%	53.7%	68.3%	27.3%	3.0%	0.9%	0.5%	
			White, non-Hisp.	19.3	96	77	3.2	78.7	53.8	69.0	26.6	3.1	0.9	0.3	
			Black, non-Hisp.	0.1	**	**	**	**	**	**	**	**	--	--	**
			Hispanic	1.8	**	**	**	82.4	47.1	35.3	64.7	--	--	--	**
			Asian	0.3	**	**	**	**	**	**	**	**	**	**	**
			Other	0.8	**	**	**	**	**	**	**	**	**	**	**
Unknown	--	--	--	--	--	--	--	--	--	--	--	--			
Goddard Memorial	Stoughton	2,321 2.7%	TOTAL	24.3%	395	168	4.7%	62.9%	43.5%	73.5%	21.8%	2.4%	2.0%	0.3%	
			White, non-Hisp.	23.8	338	141	4.2	65.4	44.1	76.8	18.5	2.3	2.1	0.3	
			Black, non-Hisp.	7.1	33	17	9.1	45.1	32.9	48.8	47.6	2.4	0.6	0.6	
			Hispanic	3.1	**	**	5.5	50.7	43.8	38.4	57.5	4.1	--	--	
			Asian	1.3	**	**	10.0	46.7	56.7	70.0	23.3	3.3	3.3	--	
			Other	1.9	**	**	6.8	45.5	45.5	79.5	18.2	--	2.3	--	
Unknown	**	**	**	**	**	**	**	**	**	**	**	**			
Hale	Haverhill	751 0.9%	TOTAL	20.2%	94	58	4.3%	73.5%	40.1%	60.9%	34.5%	3.2%	1.2%	0.3%	
			White, non-Hisp.	21.2	89	54	4.4	75.6	40.7	63.3	32.1	3.3	1.3	--	
			Black, non-Hisp.	1.1	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	7.1	**	**	1.9	49.1	37.7	32.1	66.0	1.9	--	--	
			Asian	1.3	**	**	**	80.0	20.0	70.0	20.0	10.0	--	--	
			Other	0.5	**	**	**	**	**	**	**	**	**	**	**
Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**			
Harrington Memorial	Southbridge	571 0.7%	TOTAL	18.4%	80	25	3.9%	65.7%	43.4%	63.4%	31.0%	5.1%	0.5%	--	
			White, non-Hisp.	19.2	75	23	3.5	67.5	45.0	67.3	27.0	5.1	0.6	--	
			Black, non-Hisp.	--	--	--	--	--	--	--	--	--	--	--	--
			Hispanic	9.6	**	**	5.5	47.3	29.1	27.3	67.3	5.5	--	--	--
			Asian	0.7	**	**	**	**	**	**	**	**	**	**	**
			Other	0.2	**	**	**	**	**	**	**	**	**	**	**
Unknown	--	--	--	--	--	--	--	--	--	--	--	--			
Henry Heywood Memorial	Gardner	335 0.4%	TOTAL	23.9%	51	29	4.8%	54.0%	49.0%	57.0%	39.1%	2.7%	1.2%	--	
			White, non-Hisp.	24.1	49	28	3.7	54.4	49.1	56.9	39.1	2.8	1.2	--	
			Black, non-Hisp.	0.6	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	1.8	**	**	**	**	**	**	**	**	**	**	**
			Asian	2.1	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--

TABLE B-10, continued  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment					
				Caesarean						% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown	
				% Total	# Primary	# Repeat									
Holy Family (formerly Bon Secours)	Methuen	1,158 1.3%	TOTAL	29.8%	221	124	3.6%	72.5%	49.3%	72.1%	20.3%	5.0%	2.3%	0.3%	
			White, non-Hisp.	29.7	175	106	2.9	79.9	50.2	81.6	10.7	4.9	2.5	0.3	
			Black, non-Hisp.	**	**	**	**	44.4	44.4	11.1	77.8	--	11.1	--	
			Hispanic	32.2	42	17	7.1	37.2	45.4	25.1	67.2	6.6	1.1	--	
			Asian	**	**	**	16.7	66.7	50.0	91.7	8.3	--	--	--	
			Other	**	**	**	**	**	**	**	**	**	**	**	
Hunt Memorial	Danvers	745 0.9%	TOTAL	21.1%	103	54	3.2%	93.7%	63.6%	86.4%	7.0%	2.8%	1.1%	2.7%	
			White, non-Hisp.	21.3	102	54	3.3	94.0	63.4	86.6	6.8	2.7	1.1	2.7	
			Black, non-Hisp.	---	---	---	---	---	---	---	---	---	---	---	---
			Hispanic	**	**	**	**	80.0	70.0	80.0	20.0	--	--	--	--
			Asian	**	**	**	**	**	**	**	**	**	**	**	**
			Other	--	--	--	--	--	--	--	--	--	--	--	--
Jordan	Plymouth	819 0.9%	TOTAL	21.4%	93	82	3.5%	76.3%	58.6%	75.6%	20.4%	3.1%	0.7%	0.2%	
			White, non-Hisp.	20.7	85	76	3.2	77.1	59.3	77.0	19.2	3.0	0.6	0.3	
			Black, non-Hisp.	**	**	**	12.5	62.5	31.2	43.7	50.0	6.2	--	--	--
			Hispanic	1.7	**	**	**	42.9	78.6	50.0	42.9	7.1	**	**	**
			Asian	0.5	**	**	**	**	**	**	**	**	**	**	**
			Other	0.9	**	**	**	**	**	**	**	**	**	**	**
Lawrence General	Lawrence	1,793 2.1%	TOTAL	21.6%	217	157	4.2%	41.8%	41.9%	57.2%	34.0%	2.8%	0.7%	5.3%	
			White, non-Hisp.	23.0	149	86	4.6	53.7	42.4	78.0	15.0	3.0	1.2	2.9	
			Black, non-Hisp.	**	**	**	**	50.0	33.3	33.3	66.7	--	--	--	--
			Hispanic	18.8	39	51	3.3	30.9	52.0	21.3	73.6	2.6	--	2.4	6.4
			Asian	2.6	**	**	**	42.6	46.8	63.8	21.3	6.4	2.1	6.4	10.0
			Other	1.1	**	**	**	25.0	50.0	45.0	40.0	5.0	--	10.0	26.4
Leominster	Leominster	1,072 1.2%	TOTAL	23.5	20	16	6.0	4.4	9.9	36.8	35.7	1.1	--	--	
			White, non-Hisp.	21.9%	148	87	4.4%	74.8%	52.8%	68.8%	28.0%	2.4%	0.7%	--	--
			Black, non-Hisp.	21.9	124	74	4.3	76.9	53.4	74.5	22.6	2.3	0.6	--	--
			Hispanic	**	**	**	6.7	57.8	48.9	28.9	66.7	2.2	2.2	--	--
			Asian	20.9	13	6	3.3	65.9	54.9	38.5	59.3	1.1	1.1	--	--
			Other	**	**	**	3.6	60.7	28.6	53.6	35.7	7.1	3.6	**	**
Leonard Morse	Natick	749 0.9%	TOTAL	25.8%	114	79	4.0%	85.0%	59.0%	85.8%	7.9%	1.5%	4.3%	0.5%	
			White, non-Hisp.	25.3	100	69	3.7	86.5	60.3	88.0	6.6	1.6	3.3	0.4	
			Black, non-Hisp.	**	**	**	6.7	66.7	53.3	60.0	33.3	--	6.7	--	--
			Hispanic	**	**	**	**	81.5	63.0	66.7	29.6	--	3.7	--	--
			Asian	**	**	**	5.6	77.8	61.1	77.8	5.6	--	16.7	--	--
			Other	**	**	**	13.3	60.0	--	60.0	6.7	--	26.7	6.7	**

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment					
				Caesarean						% Private	% Government Assistance	% Self Paid	% Free & Other	% Unknown	
				% Total	# Primary	# Repeat									
Lowell General	Lowell	2,386 2.8%	TOTAL	22.8%	320	225	4.9%	72.8%	37.5%	61.1%	30.4%	2.1%	0.4%	6.0%	
			White, non-Hisp.	24.7	260	183	4.2	81.4	41.1	71.1	20.5	1.9	0.3	6.1	
			Black, non-Hisp.	**	**	**	3.1	59.4	56.2	37.5	53.1	6.2	3.1	--	
			Hispanic	24.4	29	28	4.7	53.4	35.5	27.4	65.4	3.0	--	4.3	
			Asian	12.2	25	11	9.1	39.2	17.2	30.7	60.1	2.0	0.7	6.4	
			Other	**	**	**	**	52.4	14.3	52.4	28.6	--	4.8	14.3	
			Unknown	**	**	**	**	**	**	**	**	**	**	**	
Malden	Malden	2,170 2.5%	TOTAL	25.9%	343	218	3.3%	72.7%	44.8%	77.1%	17.7%	4.6%	0.4%	0.2%	
			White, non-Hisp.	26.0	313	200	3.0	73.9	44.9	79.5	15.9	4.3	0.2	0.1	
			Black, non-Hisp.	**	**	**	5.9	55.9	64.7	41.2	47.1	8.8	--	2.9	
			Hispanic	25.4	11	5	3.2	65.1	57.1	58.7	36.5	4.8	--	--	
			Asian	**	**	**	4.9	63.4	56.1	61.0	29.3	7.3	2.4	--	
			Other	**	**	**	5.8	57.7	13.5	48.1	32.7	9.6	7.7	1.9	
			Unknown	**	**	**	**	**	**	**	**	**	**	**	
Martha's Vineyard	Oak Bluffs	176 0.2%	TOTAL	28.0%	38	11	5.1%	80.1%	79.5%	70.5%	17.6%	10.8%	--	1.1%	
			White, non-Hisp.	25.8	31	11	4.9	79.9	81.1	73.8	16.5	9.8	--	--	
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	**	**	**	**	**	**	**	**	**
			Other	**	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Mary Lane	Ware	241 0.3%	TOTAL	25.7%	42	20	3.3%	68.9%	44.8%	62.7%	31.5%	4.6%	1.2%	--	
			White, non-Hisp.	25.8	42	20	3.3	68.7	45.0	62.5	31.7	4.6	1.2	--	--
			Black, non-Hisp.	--	--	--	--	--	--	--	--	--	--	--	--
			Hispanic	**	**	**	**	**	**	**	**	**	**	**	**
			Asian	--	--	--	--	--	--	--	--	--	--	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--
Melrose-Wakefield	Melrose	1,244 1.4%	TOTAL	30.6	241	139	3.3%	79.0%	46.7%	89.2%	6.8%	1.1%	1.0%	1.9%	
			White, non-Hisp.	31.0	235	138	3.3	79.3	45.8	88.9	6.9	1.2	1.0	2.0	
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	46.2	92.3	100.0	--	--	--	--	--
			Asian	**	**	**	6.2	81.2	68.7	100.0	--	--	--	--	--
			Other	**	**	**	**	**	**	**	**	**	**	**	**
			Unknown	**	**	**	**	**	**	**	**	**	**	**	**
Milford-Whitinsville	Milford	460 0.5%	TOTAL	33.0%	83	69	4.3%	68.0%	38.5%	78.9%	16.1%	3.7%	0.7%	0.7%	
			White, non-Hisp.	32.3	77	64	4.4	69.0	37.4	80.0	15.8	3.0	0.5	0.7	
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	7.1	57.1	50.0	57.1	21.4	21.4	--	--	--
			Asian	**	**	**	**	**	**	**	**	**	**	**	**
			Other	**	**	**	**	**	**	**	**	**	**	**	**
			Unknown	--	--	--	--	--	--	--	--	--	--	--	--

TABLE B-10, continued  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
				Caesarean						% Private	% Government Assistance	% Free & Self Paid	% Other	% Unknown
				% Total	# Primary	# Repeat								
Morton	Taunton	649 0.8%	TOTAL 100.0% White, non-Hisp. 93.7 Black, non-Hisp. 2.0 Hispanic 2.9 Asian 0.5 Other 0.6 Unknown 0.3	27.3% 26.9 ** ** ** ** **	115 105 ** ** ** ** **	62 58 ** ** ** ** **	4.8% 4.6 7.7 5.3 ** ** **	71.8% 72.5 61.5 57.9 ** ** **	36.8% 36.8 23.1 42.1 ** ** **	73.7% 76.2 38.5 26.3 ** ** **	24.3% 21.7 61.5 73.7 ** ** **	1.7% 1.8 -- -- ** ** **	0.2% 0.2 -- -- ** ** **	
Mount Auburn	Cambridge	1,149 1.3%	TOTAL 100.0% White, non-Hisp. 85.1 Black, non-Hisp. 5.6 Hispanic 5.3 Asian 3.0 Other 0.9 Unknown 0.2	26.0% 26.5 28.1 ** ** ** **	198 168 12 ** ** ** **	101 91 6 ** ** ** **	2.4% 2.7 3.1 ** ** ** **	73.5% 76.0 60.9 62.3 61.8 30.0 **	61.7% 60.2 70.3 70.3 82.4 60.0 **	75.9% 79.2 67.2 47.5 61.8 40.0 **	20.5% 17.6 26.6 52.5 29.4 40.0 **	2.0% 1.7 4.7 -- 5.9 10.0 **	0.3% 0.3 -- -- 2.9 -- **	
Nantucket Cottage	Nantucket	81 0.1%	TOTAL 100.0% White, non-Hisp. 95.1 Black, non-Hisp. 3.7 Hispanic 1.2 Asian -- Other -- Unknown --	19.8% ** ** ** -- -- --	10 ** ** ** -- -- --	6 ** ** ** -- -- --	2.5% 2.6 ** ** ** -- --	71.6% 71.4 ** ** ** -- --	64.2% 64.9 ** ** ** -- --	75.3% 79.2 ** ** ** -- --	14.8% 10.4 ** ** ** -- --	9.9% 10.4 ** ** ** -- --	-- -- ** ** ** -- --	
New England Memorial	Stoneham	704 0.8%	TOTAL 100.0% White, non-Hisp. 95.7 Black, non-Hisp. 0.4 Hispanic 1.7 Asian 1.8 Other 0.3 Unknown --	30.5% 30.5 ** ** ** ** **	125 121 ** ** ** ** **	89 84 ** ** ** ** **	3.8% 3.9 ** ** ** 7.7 --	95.0% 95.3 ** ** ** 84.6 --	59.9% 58.6 ** ** 91.7 84.6 --	92.8% 92.9 ** 83.3 100.0 ** --	3.8% 3.9 ** -- -- ** --	1.8% 1.8 ** 8.3 -- ** --	1.4% 1.5 -- -- -- ** --	
Newton-Wellesley	Newton	2,839 3.3%	TOTAL 100.0% White, non-Hisp. 95.2 Black, non-Hisp. 1.2 Hispanic 1.3 Asian 1.7 Other 0.5 Unknown 0.1	20.1% 20.1 ** ** ** ** **	332 316 ** ** ** ** **	238 226 ** ** ** ** **	2.4% 2.3 5.7 ** 4.3 7.1 **	94.9% 95.1 97.1 92.1 93.6 71.4 **	74.6% 74.2 77.1 89.5 85.1 78.6 **	96.3% 96.7 97.1 89.5 93.6 64.3 **	1.3% 1.2 -- 7.9 -- 7.1 **	1.2% 1.3 2.9 -- -- -- **	0.6% 0.5 -- -- 4.3 -- **	
North Adams Regional	North Adams	390 0.4%	TOTAL 100.0% White, non-Hisp. 98.7 Black, non-Hisp. 0.5 Hispanic 0.8 Asian -- Other -- Unknown --	17.9% 17.9 ** ** -- -- --	48 48 ** ** -- -- --	22 21 ** ** -- -- --	3.8% 3.6 ** ** -- -- --	81.3% 81.6 ** ** -- -- --	48.7% 48.8 ** ** -- -- --	71.0% 71.2 ** ** -- -- --	25.6% 25.7 ** ** -- -- --	3.3% 3.1 ** ** -- -- --	-- -- ** ** -- -- --	



TABLE 8-10, continued  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment				
				Caesarean						% Private	% Government Assistance	% Self Paid	% Other	% Unknown
				% Total	# Primary	# Repeat								
Norwood	Norwood	931 1.1%	TOTAL	25.2%	135	100	3.8%	84.5%	51.7%	82.7%	9.0%	2.5%	4.5%	1.3%
			White, non-Hisp.	25.0	122	93	3.4	85.2	54.0	85.8	8.7	2.7	2.3	0.5
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	**	63.6	63.6	72.7	9.1	--	9.1	9.1
Providence	Holyoke	1,405 1.6%	TOTAL	18.4%	135	124	2.1%	68.3%	48.9%	57.2%	38.8%	2.2%	1.5%	0.3%
			White, non-Hisp.	18.4	99	96	1.8	75.0	53.5	73.0	22.4	2.6	1.8	0.2
			Black, non-Hisp.	**	**	**	4.5	36.4	27.3	13.6	86.4	--	--	--
			Hispanic	19.4	34	26	3.2	48.5	34.0	7.8	90.3	1.0	0.3	0.6
			Asian	**	**	**	**	50.0	70.0	30.0	60.0	--	10.0	--
Quincy City	Quincy	866 1.0%	TOTAL	31.9%	161	115	2.7%	41.5%	47.9%	85.6%	5.9%	1.7%	1.8%	5.0%
			White, non-Hisp.	31.9	152	109	2.7	41.5	48.3	86.6	5.4	1.8	1.8	4.4
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	**	47.1	41.2	76.5	17.6	--	--	5.9
Salem	Salem	1,502 1.7%	TOTAL	29.8%	270	178	3.9%	88.8%	49.5%	68.5%	24.6%	1.7%	1.9%	3.4%
			White, non-Hisp.	30.0	223	145	3.8	89.5	48.9	76.6	18.3	1.8	1.9	1.5
			Black, non-Hisp.	**	**	**	2.6	86.8	47.4	39.5	57.9	--	2.6	--
			Hispanic	32.2	19	18	4.3	76.5	74.8	22.6	72.2	1.7	2.6	0.9
			Asian	**	**	**	5.9	94.1	47.1	76.5	17.6	--	5.9	--
South Shore	Weymouth	1,941 2.2%	TOTAL	26.6%	292	224	2.7%	70.8%	18.6%	90.2%	4.0%	3.0%	1.4%	1.3%
			White, non-Hisp.	26.6	275	211	2.7	71.2	18.7	91.2	3.8	3.0	1.1	0.8
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	8.3	58.3	33.3	75.0	--	16.7	8.3	--
St. Elizabeth's	Boston	1,186 1.4%	TOTAL	26.9%	219	100	5.8%	82.7%	30.1%	61.9%	34.5%	2.0%	1.1%	0.5%
			White, non-Hisp.	29.5	135	75	4.8	91.4	26.3	76.8	19.4	2.3	1.4	0.1
			Black, non-Hisp.	26.3	21	4	9.4	76.0	38.5	53.1	42.7	2.1	--	2.1
			Hispanic	25.0	42	12	6.9	66.2	42.6	30.1	67.6	0.9	0.9	0.5
			Asian	18.2	20	9	6.9	71.1	24.5	44.0	51.6	2.5	0.6	1.3
			Other	**	**	**	**	**	**	**	**	**	**	**
			Unknown	**	**	**	**	**	**	**	**	**	**	**
				**	**	**	**	**	**	**	**	**	**	**
				**	**	**	**	**	**	**	**	**	**	**
				**	**	**	**	**	**	**	**	**	**	**

TABLE B-10, continued  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment					
				Caesarean		% Total				% Private	% Government Assistance	% Self Paid	% Other	% Unknown	
				# Primary	# Repeat										
St. Joseph's	Lowell	296 0.3%	TOTAL	69	37	35.8%	4.7%	66.2%	40.5%	91.9%	3.4%	4.4%	0.3%	--	
			White, non-Hisp.	64	35	37.2	3.4	69.2	40.2	93.2	2.6	3.8	0.4	--	
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	
			Hispanic	**	**	**	**	**	**	**	**	**	**	**	
			Asian	**	**	**	18.7	31.2	43.7	93.7	6.2	--	--	--	
			Other	--	--	--	--	--	--	--	--	--	--	--	
Unknown	--	--	--	--	--	--	--	--	--	--	--	--			
St. Luke's	New Bedford	2,053 2.4%	TOTAL	375	177	26.9%	5.2%	78.6%	38.5%	60.5%	35.7%	2.8%	1.1%	--	
			White, non-Hisp.	323	159	27.2	4.4	81.7	39.9	66.1	29.9	2.9	2.9	1.1	--
			Black, non-Hisp.	**	**	**	13.0	59.3	25.9	24.1	74.1	1.9	1.9	--	--
			Hispanic	22	9	30.4	8.8	51.0	25.5	11.8	85.3	2.0	2.0	1.0	--
			Asian	**	**	**	**	83.3	66.7	58.3	33.3	8.3	8.3	--	--
			Other	15	6	19.1	11.8	63.6	30.9	33.6	63.6	1.8	1.8	0.9	--
Unknown	**	**	**	**	**	**	**	**	**	**	**	**	**		
St. Margaret's	Boston	3,381 3.9%	TOTAL	711	368	32.0%	14.2	69.0	40.3	60.7	34.5	2.7	0.6	1.4	
			White, non-Hisp.	544	325	34.4	13.6	74.4	39.1	69.0	26.2	2.8	2.8	0.5	1.5
			Black, non-Hisp.	104	25	25.3	18.5	52.3	44.9	38.3	56.4	2.5	2.5	1.2	1.6
			Hispanic	33	10	23.8	14.3	55.5	45.6	20.3	75.8	2.7	2.7	--	1.1
			Asian	16	4	23.0	12.6	49.4	33.3	43.7	52.9	3.4	3.4	--	--
			Other	13	4	27.9	9.8	57.4	42.6	52.5	44.3	1.6	1.6	--	1.6
Unknown	**	**	**	**	**	**	**	**	**	**	**	**	**		
St. Vincent's	Worcester	1,955 2.3%	TOTAL	176	114	14.8%	3.8%	82.6%	51.9%	78.0%	18.6%	2.5%	0.6%	0.4%	
			White, non-Hisp.	141	101	15.1	3.4	85.2	54.5	82.8	14.0	2.4	2.4	0.3	0.4
			Black, non-Hisp.	**	**	**	12.2	70.7	26.8	63.4	34.1	2.4	2.4	--	--
			Hispanic	14	3	12.1	4.3	67.1	38.6	33.6	62.1	4.3	4.3	--	--
			Asian	**	**	**	2.4	73.8	57.1	72.6	26.2	1.2	1.2	--	--
			Other	**	**	**	8.0	76.0	30.7	69.3	18.7	4.0	4.0	8.0	--
Unknown	**	**	**	8.3	66.7	50.0	83.3	16.7	--	--	--	--			
Sturdy Memorial	Attleboro	988 1.1%	TOTAL	159	98	26.0%	3.0%	63.4%	52.0%	80.8%	16.8%	2.2%	0.2%	--	
			White, non-Hisp.	149	93	25.8	3.0	64.8	52.8	82.3	15.2	2.3	2.3	0.2	--
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	31.8	36.4	50.0	50.0	--	--	--	--
			Asian	**	**	**	8.0	44.0	36.0	48.0	52.0	--	--	--	--
			Other	--	--	--	--	--	--	--	--	--	--	--	--
Unknown	--	--	--	--	--	--	--	--	--	--	--	--			
Tobey	Wareham	351 0.4%	TOTAL	37	31	19.4%	5.1%	89.7%	61.0%	63.5%	27.6%	6.3%	1.7%	0.9%	
			White, non-Hisp.	36	28	19.8	5.6	90.4	62.7	67.3	24.4	6.2	6.2	1.9	0.3
			Black, non-Hisp.	**	**	**	**	72.7	45.5	9.1	90.9	--	--	--	--
			Hispanic	**	**	**	**	**	**	**	**	**	**	**	**
			Asian	**	**	**	**	**	**	**	**	**	**	**	**
			Other	**	**	**	**	80.0	30.0	20.0	70.0	--	--	--	10.0
Unknown	**	**	**	**	**	**	**	**	**	**	**	**			



TABLE 8-10, continued  
HOSPITAL PROFILES  
MASSACHUSETTS OCCURRENCE BIRTHS  
1987

Hospital Name	City/Town	Occurrence Births	% of Births by Race of Mother	Method of Delivery			% Low Birth Weight	% Adequate Prenatal Care	% Mothers Breast Feeding	Delivery Method of Payment					
				Caesarean						% Private	% Government Assistance	% Self Paid	% Free & Other	% Unknown	
				% Total	# Primary	# Repeat									
Waltham-Weston	Waltham	699 0.8%	TOTAL	27.9%	101	94	2.4%	85.7%	47.5%	80.8%	14.7%	2.4%	1.6%	0.4%	
			White, non-Hisp.	28.9	91	85	2.5	87.8	45.9	83.4	12.7	2.0	1.5	0.5	
			Black, non-Hisp.	**	**	**	4.5	72.7	63.6	63.6	22.7	9.1	4.5	--	
			Hispanic	**	**	**	2.5	72.5	60.0	57.5	35.0	5.0	2.5	--	
			Asian	**	**	**	**	70.4	51.9	70.4	25.9	3.7	**	**	
			Other	**	**	**	**	**	**	**	**	**	**	**	
Unknown	--	--	--	--	--	--	--	--	--	--	--	--	--		
Winchester	Winchester	1,606 1.9%	TOTAL	27.5%	259	182	3.3%	79.2%	43.2%	85.3%	8.7%	2.9%	2.4%	0.7%	
			White, non-Hisp.	27.6	246	177	3.2	80.3	43.1	86.2	8.3	2.7	2.3	0.5	
			Black, non-Hisp.	**	**	**	**	**	**	**	**	**	**	**	**
			Hispanic	**	**	**	**	52.9	50.0	58.8	23.5	5.9	8.8	2.9	
			Asian	**	**	**	15.8	52.6	57.9	84.2	10.5	--	5.3	--	
			Other	**	**	**	**	**	**	**	**	**	**	**	**
Unknown	0.2	**	**	**	**	**	**	**	**	**	**	**	**		
Worcester Hahnemann	Worcester	1,124 1.3%	TOTAL	23.7%	146	120	2.8%	67.0%	53.3%	73.6%	22.1%	3.7%	0.5%	0.1%	
			White, non-Hisp.	23.7	129	112	2.5	69.0	54.2	77.3	18.5	3.6	0.5	--	
			Black, non-Hisp.	**	**	**	11.1	55.6	44.4	44.4	44.4	11.1	--	--	
			Hispanic	**	**	**	3.3	47.5	36.1	26.2	68.9	4.9	--	--	
			Asian	**	**	**	**	40.0	65.0	70.0	30.0	--	--	--	
			Other	**	**	**	**	**	**	**	**	**	**	**	**
Unknown	0.1	**	**	**	**	**	**	**	**	**	**	**	**		
Worcester Memorial	Worcester	3,260 3.8%	TOTAL	27.8%	572	335	11.3%	87.6%	52.1%	76.2%	21.2%	2.5%	0.1%	0.1%	
			White, non-Hisp.	27.7	509	294	10.8	89.5	52.9	81.7	16.0	2.2	--	--	
			Black, non-Hisp.	35.2	19	12	20.5	70.5	33.0	33.0	60.2	5.7	--	1.1	
			Hispanic	30.2	38	26	12.3	69.3	50.9	18.4	76.4	5.2	--	--	
			Asian	**	**	**	17.5	82.5	52.5	80.0	20.0	--	--	--	
			Other	**	**	**	9.5	95.2	38.1	76.2	19.0	--	4.8	--	
Unknown	--	--	--	--	--	--	--	--	--	--	--	--			
All other hospitals, birthing centers, at home en route, other	Statewide	596 0.7%	TOTAL	**	**	**	4.7%	57.4%	74.7%	48.3%	13.9%	27.0%	2.9%	7.9%	
			White, non-Hisp.	**	**	**	2.7	64.5	84.6	54.4	8.0	29.8	2.7	5.1	
			Black, non-Hisp.	**	**	**	15.4	7.7	34.6	30.8	50.0	3.8	7.7	7.7	
			Hispanic	**	**	**	21.1	31.6	36.8	21.1	63.2	10.5	--	5.3	
			Asian	**	**	**	14.3	28.6	9.5	19.0	71.4	4.8	--	4.8	
			Other	**	**	**	**	27.3	27.3	36.4	27.3	9.1	9.1	18.2	
Unknown	5.4	**	**	12.5	34.4	37.5	9.4	3.1	34.4	3.1	3.1	50.0			
TOTAL		86,233 100.0%	TOTAL	24.6%	12,906	7,767	5.7%	75.6%	52.2%	72.8%	21.8%	3.1%	0.9%	1.3%	
			White, non-Hisp.	25.0	10,742	6,567	5.0	79.3	53.5	80.0	15.1	2.9	0.9	1.1	
			Black, non-Hisp.	24.2	894	423	12.5	56.3	45.6	40.5	53.4	4.1	0.7	1.3	
			Hispanic	23.0	763	503	6.9	58.4	50.8	29.1	65.5	3.9	0.5	0.9	
			Asian	18.0	290	126	6.2	64.5	47.0	58.8	34.2	3.4	1.3	2.3	
			Other	23.7	151	99	7.7	65.0	36.2	51.6	33.8	3.0	5.9	5.7	
Unknown	0.6	66	49	7.9	40.3	23.8	39.9	24.9	3.8	3.0	28.4				



# MORTALITY



## SECTION C

### MORTALITY

Resident deaths decreased by 0.5% in Massachusetts from 55,860 in 1986 to 55,562 in 1987. The rate of deaths per 1,000 population also decreased from 9.6 in 1986 to 9.5 in 1987. As with live births, deaths to Massachusetts residents include all deaths to Massachusetts residents regardless of the state in which they occurred. Most data presented in this section are residence data. Occurrence data are used only with medical examiner data.

#### DEATHS BY RACE

The number of deaths by race remained relatively constant, with white residents comprising 96.3% of total deaths in Massachusetts.

Race data provided through death certificates vary considerably from that provided on birth certificates. On birth certificates, race is provided as part of the confidential, statistical portion of the record. As such, there is a significant problem with non-respondents. On the death certificate, however, race information (as is all information on the death certificate) is part of the legal record and must be provided by the funeral director in order to register the death. An unknown or non-response in the race item might be the result of a case in which a body is badly decomposed, rather than a refusal to provide the information.

As with birth certificate data, there is a problem identifying those deaths to individuals of Hispanic ethnicity. The question as asked on the 1986 death certificate was limited to a race question and, in many cases, individuals with an Hispanic ethnicity were identified using a race designation, for example, white or black, rather than a response of Hispanic. If the response was Hispanic, however, these deaths are included in the larger category of "white". Race information on the death certificate is provided by the informant, which in most cases is a close relative. Beginning on January 1, 1989, an additional item on Hispanic origin was added to the death record.

#### DEATHS BY AGE

Persons 75 years of age or older accounted for 53.7% of deaths. The percent of deaths to residents in this age group vary widely by race and sex.

SEX	RACE	% OF DEATHS UNDER AGE 75	% OF DEATHS 75 YEARS AND OLDER
MALE	WHITE	57.0	43.0
	BLACK	77.0	23.0
	TOTAL	57.9	42.1
FEMALE	WHITE	34.5	65.5
	BLACK	61.9	38.1
	TOTAL	35.4	64.6
TOTAL	WHITE	45.4	54.6
	BLACK	70.0	30.0
	TOTAL	46.3	53.7

## DEATHS BY PLACE OF OCCURRENCE

Between 1986 and 1987, there was little variation in where deaths occurred, as shown in the data presented below:

SITE	% OF DEATHS	% OF DEATHS
	1987	1986
HOSPITAL	61.8	62.3
AT HOME	15.3	14.7
NURSING OR REST HOME	15.6	15.4
EN ROUTE TO HOSPITAL OR DEAD ON ARRIVAL	6.2	6.6
OTHER AND UNKNOWN	<u>1.0</u>	<u>1.0</u>
TOTAL	100.0*	100.0

\*Percent does not sum to 100.0 due to rounding.

## DEATHS BY CAUSE

Cause of death statistics in this report are based on the Ninth Revision of the International Classification of Diseases (ICD-9). The methodology of coding cause of death from death certificates is consistent nationally, using the Automated Classification of Medical Entities (ACME), developed by the National Center for Health Statistics (NCHS). The ACME system requires every disease or condition mentioned on the record to be coded. The underlying cause is then selected by a computer program which incorporates the ICD-9 rules and conventions. Cause of death information in this report is based on underlying cause, except where otherwise noted.

Three tables (C-5, C-6, and C-10) present data based on multiple conditions rather than underlying cause data. These tables are presented to illustrate the use of multiple cause data by extending the utility of mortality data. This is particularly true when utilizing mortality data as a method of surveillance. For example, in 1987 there were 13,265 deaths resulting from cancer as an underlying cause of death. However, an additional 2,334 deaths where cancer was not the underlying cause did include cancer as a mentioned condition, increasing the surveillance data base.

Table C-10 demonstrates the ability of multiple cause data to enhance the function of mortality data as a morbidity tool in cases of diseases that are not traditional underlying causes of death. In the case of diabetes, for example, 848 deaths had this condition listed as an underlying cause, but an additional 3,455 had diabetes listed as a mentioned condition, thus increasing the ability to determine the prevalence of diabetes in the population.

The leading causes of death differ by race. Among white and non-white Massachusetts residents, heart disease and cancer rank as the first two leading causes. As in 1986, cerebrovascular disease continues to be the third highest ranking cause of death for non-white residents. However, in 1987, diseases of the respiratory system rank as the third leading cause of death for white Massachusetts residents, while ranking as the fourth leading cause for non-white residents. Perinatal mortality ranks fifth among the leading causes for non-white residents, but is not among the five leading causes for white Massachusetts residents.



CAUSE	WHITE	RANK	NON-WHITE	RANK
HEART DISEASE	19,560 36.5%	1	545 26.7%	1
MALIGNANT NEOPLASMS	12,827 24.0%	2	438 21.5%	2
DISEASES OF RESPIRATORY SYSTEM	4,991 9.3%	3	121 5.9%	4
CEREBROVASCULAR DISEASE	3,649 6.8%	4	128 6.3%	3
PNEUMONIA & INFLUENZA	2,406 4.5%	5	NOT LEADING CAUSE	
PERINATAL MORTALITY	NOT LEADING CAUSE		77 3.8%	5
ALL OTHER CAUSES*	10,089 18.9%	-	729 35.8%	-

\*All Other Causes includes diabetes mellitus, chronic liver disease and cirrhosis, atherosclerosis, suicide, intentional and unintentional injuries, and all other causes not specifically mentioned above.

#### ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

The Ninth Revision of the International Classification of Diseases was developed before the identification of AIDS. Classification of this disease and related diseases has evolved since 1981. The deaths presented in Table C-9 were coded by using the most current schedule, which began with 1987 data. Therefore, comparison data from previous years are not available. As time passes and more becomes known about AIDS, additional limitations to the coding schedule will also become known.

#### DEATHS CERTIFIED BY MEDICAL EXAMINERS

The total number of deaths certified by medical examiners decreased from 10,945 in 1986 to 10,235 in 1987. Of the deaths certified by medical examiners, 75.2% were reported as a result of nonviolent causes. The percentage of nonviolent deaths certified by medical examiners varies widely by county, from a high of 82.6% in Plymouth County to a low of 56.7% in Worcester County. Suffolk County had the greatest number of deaths (1,749) that were referred to medical examiners but with the certification retained by the attending physician.

## 1990 HEALTH OBJECTIVES

Presented below is an assessment of Massachusetts compared to the 1990 health objectives using 1987 mortality data.

### 1990 OBJECTIVE:

#### Maternal Mortality:

Maternal mortality rate should not exceed 5 per 100,000 live births for any county or ethnic group.

#### Drowning:

Deaths from drowning should be reduced to no more than 1.5 per 100,000 persons.

#### Falls:

Deaths due to falls should be no more than 2 per 100,000 persons.

#### Motor Vehicle Deaths:

Motor vehicle death rate for children under the age of 15 should be no more than 5.5 per 100,000 children.

Overall motor vehicle death rate should not exceed 18 per 100,000 population.

Fatalities from alcohol-related motor vehicle accidents should be less than 9.5 per 100,000 population.

#### Fires:

National Objective: No more than 4,500 residential fire deaths nationwide.

### MASSACHUSETTS--1987:

There were 3 cases of maternal mortality in 1987, resulting in a rate of 3.6.

There were 69 deaths from drowning in 1987, resulting in a rate of 1.2 per 100,000 population.

In 1987, there were 344 deaths for a rate of 5.9 per 100,000 population.

The 1987 rate was 4.2 with 48 deaths.

The rate in 1987 was 12.7, already below the 1990 objective.

In data supplied by the Registry of Motor Vehicles, the number of alcohol-related deaths was given as 272 or 4.6 per 100,000 population.

Massachusetts Objective: No more than 60 residential fire deaths per year.

MASSACHUSETTS--1987:  
There were 61 residential fire deaths in 1987.

#### Drugs:

Drug related mortalities should not exceed 2 per 100,000 population yearly.

The 1987 death rate was 0.9 with 51 deaths.

However, recent studies have shown that chemical substances such as drugs and alcohol are underreported as a cause of mortality. This rate may be impacted by this underreporting.

#### Cirrhosis:

The death rate from cirrhosis should not exceed 12 per 100,000.

The 1987 rate was 13.2 per 100,000 population.

### DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

#### AGE-ADJUSTED RATE

A procedure for adjusting rates, designed to minimize the effects of differences in age distribution when comparing rates for different populations. This procedure is accomplished by the computational process known as age standardization, whereby mortality statistics are adjusted to a reference population. For this publication, the reference population is the 1940 U.S. population, the same as used by the National Center for Health Statistics. The results of the process is a summary index that can be used to compare rates of different populations throughout the nation and over time.

#### CAUSE OF DEATH

The underlying condition which gives rise to a series of events leading to death. The code used for identifying cause of death is the Ninth Revision of the International Classification of Diseases. The underlying cause of death is generated by a computer software program developed by the National Center for Health Statistics from coding all causes on death certificates.

#### DEATH CERTIFICATE

A vital record signed by a licensed physician that includes cause of death, decedent's name, sex, birth date, place of residence, and place of occurrence.

#### INTERNATIONAL CLASSIFICATION OF DISEASES, NINTH REVISION

The International Classification of Disease (ICD) classifies mortality information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years. The Ninth Revision, published in 1977, is used to code mortality data beginning with 1979.

#### MISER

The Massachusetts Institute for Social and Economic Research. This research institute, located at the University of Massachusetts in Amherst, produces the population estimates and projections used officially by the Massachusetts Department of Public Health.

#### OCCURRENCE DEATH

Occurrence death includes all deaths that occur within the state, including deaths that occur to non-residents. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin

Islands, and the District of Columbia provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

### RACE

For death records: the response of the death record informant, for example, spouse or next of kin.

### RESIDENT DEATH

The usual place of residence as reported by the informant. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Unless otherwise noted, all data in this publication are resident data. Resident deaths include all deaths that occur to residents of the Commonwealth, wherever they occur. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

### UNDERLYING CAUSE OF DEATH

The underlying cause of death is: 1.) the disease or injury that initiated the series of events leading to death, or 2.) the circumstances of the unintentional or intentional injury that resulted in the death. See Death Certificate.

### **RATES IMPORTANT FOR THIS SECTION INCLUDE:**

#### AGE-SPECIFIC DEATH RATE

$$\frac{\text{Number of Resident Deaths in Specific Age Group}}{\text{Total Population of Specific Age Group}} \times 100,000$$

#### CAUSE-SPECIFIC DEATH RATE

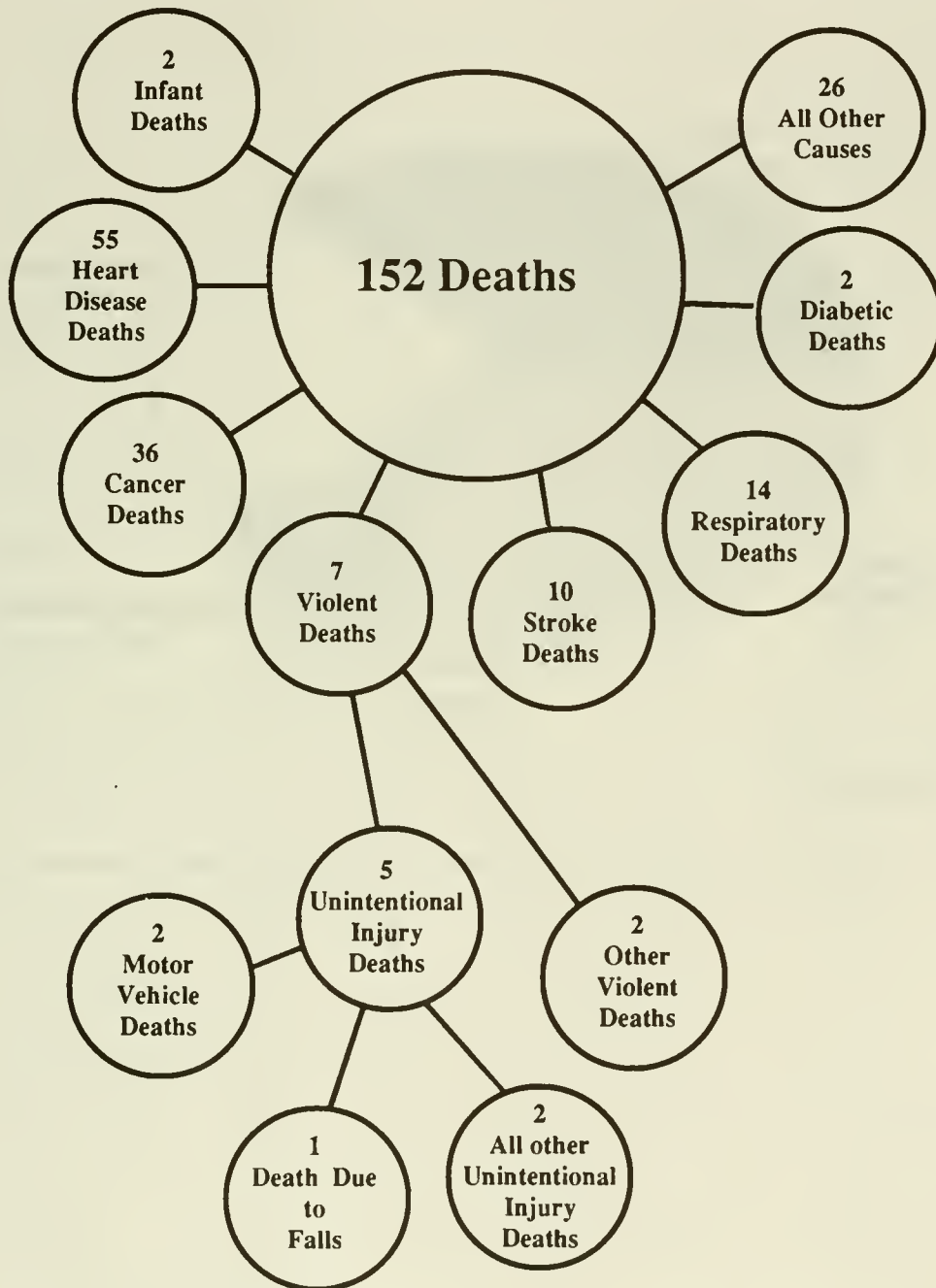
$$\frac{\text{Number of Resident Deaths for a Specific Cause}}{\text{Total Population}} \times 100,000$$

#### CRUDE DEATH RATE

$$\frac{\text{Number of Resident Deaths In A Year}}{\text{Total Population}} \times 1,000$$

**FIGURE C - 1**

**Every day in 1987, residents of Massachusetts experienced an average of:**

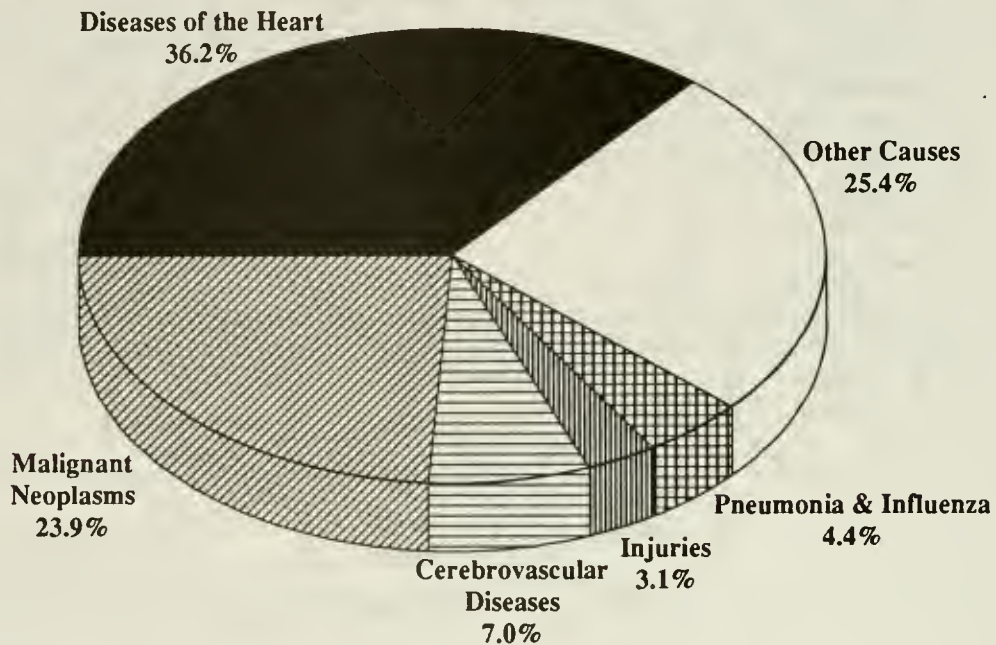




**FIGURE C - 2**

## **Five Leading Underlying Causes of Death**

**Massachusetts: 1987**



**Number of Deaths: 55,562**



TABLE C-1  
TRENDS IN MORTALITY CHARACTERISTICS  
MASSACHUSETTS RESIDENTS  
1980-1987

		Year							
		1980	1981	1982	1983	1984	1985	1986	1987
Resident Deaths	(#)	54,934	52,813	52,867	54,150	55,189	55,597	55,860	55,562
Age-adjusted Death	Rate	566.3	543.4	536.7	540.2	543.7	541.6	534.8	527.8
Race of Decedent:									
White	(#)	53,251	51,190	51,202	52,412	53,309	53,580	53,903	53,522
	(%)	96.9	96.9	96.8	96.8	96.6	96.4	96.5	96.3
Black	(#)	1,508	1,447	1,462	1,497	1,644	1,779	1,731	1,786
	(%)	2.8	2.8	2.8	2.8	3.0	3.2	3.1	3.2
Other	(#)	141	153	168	199	188	214	211	252
	(%)	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5
Unknown	(#)	34	23	35	42	48	24	15	2
	(%)	--	--	--	--	--	--	--	--
Age of Decedent:									
< 1 year	(#)	748	710	764	682	699	746	695	608
1 - 4 years	(#)	127	120	113	121	97	112	131	96
5 - 19 years	(#)	547	541	497	478	472	466	440	404
20 - 44 years	(#)	2,680	2,594	2,423	2,546	2,628	2,734	2,900	3,041
45 - 64 years	(#)	10,504	10,303	10,141	10,087	9,947	9,691	9,150	9,052
65 - 74 years	(#)	12,411	12,193	12,373	12,393	12,750	12,790	12,638	12,530
75 - 84 years	(#)	15,506	14,775	14,673	15,132	15,435	15,515	15,984	16,091
85+ years	(#)	12,409	11,572	11,874	12,704	13,158	13,538	13,918	13,737

-- Percentage less than 0.1.

TABLE C-2  
FIVE LEADING UNDERLYING CAUSES OF DEATH  
AGE-ADJUSTED RATES  
MASSACHUSETTS AND UNITED STATES  
1980-1987

		UNDERLYING CAUSE OF DEATH											
		Heart Disease (390-398, 402, 404-429)		Malignant Neoplasms (140-208)		Cerebro- vascular Diseases (430-438)		Pneumonia/ Influenza (480-487)		Unintentional Injuries (E800-E949)		All Causes	
Year		MA	U.S.*	MA	U.S.	MA	U.S.	MA	U.S.	MA	U.S.	MA	U.S.
	Rate %	205.7 39.9	202.0 38.2	136.1 22.2	132.8 20.9	36.8 7.9	40.8 8.6	18.6 4.0	12.9 2.7	30.9 3.9	42.3 5.3	566.3	585.8
1981	Rate %	197.0 39.9	195.0 38.1	136.6 23.2	131.6 21.3	34.0 7.6	38.1 8.3	16.4 3.7	12.3 2.7	29.2 3.8	39.8 5.1	543.4	568.2
1982	Rate %	196.4 40.0	190.5 38.3	137.5 23.8	132.6 22.0	31.7 7.3	35.8 8.0	13.8 3.2	10.9 2.5	25.4 3.4	36.6 4.8	536.7	553.2
1983	Rate %	193.0 40.1	188.8 38.2	140.0 23.8	132.5 21.9	30.2 6.8	34.4 7.7	14.7 3.5	11.8 2.8	26.6 3.5	34.9 4.6	540.2	550.5
1984	Rate %	192.8 38.8	183.6 37.4	140.6 23.6	132.6 22.1	30.6 7.0	33.4 7.6	14.8 3.5	12.2 2.9	26.0 3.4	35.0 4.6	543.7	545.9
1985	Rate %	186.7 37.9	180.5 37.2	139.3 23.5	133.6 22.0	29.8 6.8	32.3 7.3	16.7 4.0	13.4 3.2	26.0 3.4	34.7 4.5	541.6	546.1
1986	Rate %	180.7 37.2	175.0 36.4	136.9 23.4	133.2 22.3	29.3 6.7	31.0 7.1	18.4 4.5	13.5 3.3	25.7 3.3	35.2 4.5	534.8	541.7
1987	Rate %	173.2 36.2	169.6 35.9	138.1 23.9	132.9 22.4	29.1 7.0	30.3 7.0	18.0 4.4	13.1 3.3	23.8 3.1	34.6 4.5	527.8	535.5

\*Provisional United States data from the National Center for Health Statistics based on a 10 percent sample of deaths. Rates per 100,000 population in specified group.

TABLE C-3  
LEADING UNDERLYING CAUSES OF DEATH BY AGE  
MASSACHUSETTS, RESIDENTS  
1987

Deaths	Underlying Cause	ICD-9
Number	< 1 year old*	
329	Certain conditions originating in the perinatal period	760-779
125	Congenital anomalies	740-759
57	Sudden infant death syndrome	798.0
1 - 4 years old		
19	Congenital anomalies	740-759
15	Vehicle-related injuries, excluding motor vehicle	E800-E807, E826-E849
9	Major cardiovascular diseases	390-448
7	Malignant neoplasms	140-208
6	Infectious & parasitic diseases, excluding TB, polio & syphilis	001-009, 020-041, 045-088, 098-139
5 - 14 years old		
41	Motor vehicle-related injuries	E810-E825
23	Vehicle-related injuries, excluding motor vehicle	E800-E807, E826-E849
11	Malignant neoplasms of the bone, skin, oral cavity, rare sites & other	140-149, 170-173, 190-203
9	Leukemia	204-208
9	Major cardiovascular diseases	390-448
15 - 24 years old		
250	Motor vehicle-related injuries	E810-E825
105	Suicide	E950-E959
72	Vehicle-related injuries, excluding motor vehicle	E800-E807, E826-E849
48	Homicide and legal intervention	E960-E978
42	Malignant neoplasms	140-208
25 - 44 years old		
462	Malignant neoplasms	140-208
425	Major cardiovascular diseases	390-448
243	Suicide	E950-E959
220	Motor vehicle-related injuries	E810-E825
183	AIDS and HIV-related diseases	042-044
45 - 64 years old		
2,108	Ischemic heart disease	410-414
1,106	Malignant neoplasms of respiratory & intrathoracic organs	160-165
783	Malignant neoplasms of digestive organs & peritoneum	150-159
715	Malignant neoplasms of the bone, skin, oral cavity, rare sites & other	140-149, 170-173, 190-203
706	Diseases of pulmonary circulation & other forms of heart disease	415-429
65 - 74 years old		
3,304	Ischemic heart disease	410-414
1,209	Malignant neoplasms of respiratory & intrathoracic organs	160-165
1,162	Diseases of pulmonary circulation & other forms of heart disease	415-429
1,067	Malignant neoplasms of digestive organs & peritoneum	150-159
790	Malignant neoplasms of the bone, skin, oral cavity, rare sites & other	140-149, 170-173, 190-203
75 - 84 years old		
4,547	Ischemic heart disease	410-414
1,571	Diseases of pulmonary circulation & other forms of heart disease	415-429
1,288	Cerebrovascular disease	430-438
1,071	Malignant neoplasms of digestive organs & peritoneum	150-159
794	Malignant neoplasms of respiratory & intrathoracic organs	160-165
85+ years old		
3,973	Ischemic heart disease	410-414
1,735	Diseases of pulmonary circulation & other forms of heart disease	415-429
1,490	Cerebrovascular disease	430-438
1,170	Pneumonia and influenza	480-487
537	Malignant neoplasms of digestive organs and peritoneum	150-159

\*More complete information on causes of infant death is found in Table D-4.

TABLE C-4  
RESIDENT DEATHS BY AGE, SEX AND RACE  
MASSACHUSETTS RESIDENTS  
1987

AGE	TOTAL			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
TOTAL*	55,562	27,035	28,523	53,522	25,895	27,626	1,786	997	787	254	142	100
0-4	704	404	298	566	335	230	123	61	61	15	8	7
5-9	65	56	9	58	49	9	6	6	--	1	1	--
10-14	79	47	32	70	42	28	7	4	3	2	1	1
15-19	260	192	68	233	171	62	21	17	4	6	4	2
20-24	418	326	92	379	302	77	31	21	10	8	3	5
25-29	513	384	129	451	343	108	51	35	16	11	6	5
30-34	649	455	194	550	391	159	90	61	29	9	3	6
35-39	652	449	203	569	394	175	80	53	27	3	2	1
40-44	810	522	288	736	478	258	67	40	27	7	4	3
45-49	1,029	622	407	941	566	375	77	49	28	11	7	4
50-54	1,526	962	564	1,426	890	536	86	63	23	13	8	5
55-59	2,520	1,598	922	2,393	1,517	876	114	72	42	13	9	4
60-64	3,977	2,452	1,525	3,787	2,338	1,449	174	105	69	16	9	7
65-69	5,662	3,330	2,332	5,471	3,221	2,250	165	91	74	26	18	8
70-74	6,868	3,841	3,027	6,674	3,734	2,940	164	90	74	30	17	13
75-79	7,976	3,973	4,003	7,797	3,883	3,914	157	78	79	22	12	10
80-84	8,115	3,449	4,666	7,952	3,369	4,583	142	69	73	21	11	10
85-89	6,979	2,270	4,709	6,843	2,210	4,633	109	46	63	27	14	13
90-94	4,632	1,233	3,399	4,547	1,201	3,346	77	29	48	8	3	5
95-99	1,765	404	1,361	1,736	399	1,337	28	5	23	1	--	1
≥100	361	66	295	343	62	281	16	2	14	2	2	--

\*The total for 0-4 includes 2 deaths of unknown sex; the 50-54 male total includes 1 death of unknown race. There are 2 deaths of unknown age--one in the Black total and one in Unknown race total.

TABLE C-5  
DEATHS BY UNDERLYING CAUSE AND MENTIONED CONDITIONS  
MASSACHUSETTS RESIDENTS  
1987

Underlying Cause	Total Deaths	Mentioned Conditions*													Ratio of Mentions to Deaths	
		1	2	3	4	5	6	7	8	9	10	11	12	13		Tot 1-13
Total	55,562	19,320	4,316	47,617	6,862	2,389	5,753	4,245	3,104	1,180	765	2,653	778	47,358	146,340	2.63
1. Malignant Neo- plasms (140-208)	13,265	16,986	452	3,626	305	71	863	586	464	81	0	245	0	6,985	30,664	2.31
2. Diabetes Mellitus (250)	848	28	861	828	139	56	51	26	33	8	0	23	0	705	2,758	3.25
3. Diseases of the Heart (390-398, 402, 404-429)	20,106	1,133	1,946	34,640	1,416	823	756	1,087	692	117	15	506	0	9,385	52,516	2.61
4. Cerebrovascular Disease (430-438)	3,777	174	321	1,344	4,149	462	382	129	251	21	1	124	0	2,613	9,971	2.64
5. Atherosclerosis (440)	727	35	31	323	0	727	49	25	8	3	0	35	0	393	1,629	2.24
6. Pneumonia & Influenza (480-487)	2,454	226	136	1,056	237	53	2,456	143	71	25	1	34	0	1,998	6,436	2.62
7. COPD (490-496)	1,890	145	66	1,067	80	19	364	1,897	132	14	1	61	0	1,656	5,502	2.91
8. Other Respiratory Disease (460-466, 470-478, 500-508, 510-519)	768	72	28	428	25	6	25	53	823	4	2	61	0	733	2,260	2.94
9. Chronic Liver Disease & Cir- rhosis (571)	773	36	45	216	15	2	29	21	24	781	0	13	0	1,151	2,333	3.02
10. Motor Vehicle Injuries (E810- E825)	743	2	2	40	3	0	2	2	5	2	743	8	0	1,341	2,150	2.89
11. Other Injuries (E800-E809, E826- E949)	983	37	26	326	26	4	45	32	65	18	0	1,029	1	1,895	3,504	3.56
12. Suicide & Homicide (E950- E969)	772	15	1	20	2	1	3	0	12	2	0	1	774	1,118	1,949	2.52
13. All Other Causes	8,456	431	401	3,703	465	165	728	244	524	104	2	513	3	17,385	24,668	2.92

\*The numbers in the mentioned conditions columns refer to the causes with the same numbers in the underlying cause column, i.e., 1 in mentioned conditions is the number of mentions of malignant neoplasms.



TABLE C-6  
MALIGNANT NEOPLASM DEATHS BY UNDERLYING CAUSE AND MENTIONED CONDITIONS  
MASSACHUSETTS RESIDENTS  
1987

Mentioned Conditions	Underlying Cause						
	Total	Digestive Organs & Peritoneum (150-159)	Respiratory & Intrathoracic Organs (160-165)	Bone, Con- nective Tissue, Skin & Breast (170-175)	Genito- Urinary Organs (179-189)	Lymphatic & Haemato- poietic Tissue (200-208)	All Other Malignant Neoplasms
Total Mentioned Conditions	30,664	8,152	7,592	3,667	4,628	2,672	3,953
Mean Number of Mentioned Conditions Per Record	2.31	2.31	2.24	2.24	2.40	2.41	2.36
Deaths	13,265	3,529	3,383	1,635	1,932	1,109	1,677
1. Malignant Neo- plasms (140-208)	16,986	4,582	4,232	2,264	2,556	1,207	2,145
2. Diabetes Mellitus (250)	452	136	93	54	76	36	57
3. Diseases of the Heart (390-398, 402, 404-429)	3,626	903	843	404	594	366	516
4. Cerebrovascular Disease (430-438)	305	75	68	34	45	48	35
5. Atherosclerosis (440)	71	23	16	4	13	1	14
6. Pneumonia & Influenza (480-487)	863	143	316	85	93	119	107
7. COPD (490-496)	586	92	326	18	54	29	67
8. Other Respiratory Disease (460-466, 470-478, 500-508, 510-519)	464	93	151	54	44	32	90
9. Chronic Liver Disease & Cir- rhosis (571)	81	35	14	2	9	6	15
10. Unintentional Injuries (E800- E949)	245	81	52	21	40	29	22
11. All Other Causes	6,985	1,989	1,481	727	1,104	799	885

TABLE C-7  
SUICIDES BY CAUSE, SEX AND AGE  
MASSACHUSETTS RESIDENTS  
1987

UNDERLYING CAUSE	ICD-9		TOTAL	Age								
				10-14	15-19	20-29	30-39	40-49	50-59	60-69	70-79	≥80
All Suicides	E950-E958	M	435	2	28	124	94	51	57	28	37	14
		F	142	0	4	16	36	30	21	17	13	5
		T	577	2	32	140	130	81	78	45	50	19
		%	100.0	100.0	100.0	100.0*	100.0*	100.0	100.0	100.0	100.0	100.0*
Poisoning by solid or liquid substances	E950	M	36	0	1	5	13	9	5	0	1	2
		F	48	0	2	3	12	13	6	5	5	2
		T	84	0	3	8	25	22	11	5	6	4
		%	14.6	--	9.4	5.7	19.2	27.2	14.1	11.1	12.0	21.1
Poisoning by gases & vapors (not domestic gas)	E952	M	39	0	1	7	11	4	8	2	4	2
		F	26	0	0	3	6	6	7	3	1	0
		T	65	0	1	10	17	10	15	5	5	2
		%	11.3	--	3.1	7.1	13.1	12.3	19.2	11.1	10.0	10.5
Hanging, Strangulation & Suffocation	E953	M	152	1	17	51	23	19	19	10	10	2
		F	35	0	0	7	7	6	4	4	5	2
		T	187	1	17	58	30	25	23	14	15	4
		%	32.4	50.0	53.1	41.4	23.1	30.9	29.5	31.1	30.0	21.1
Submersion (Drowning)	E954	M	17	0	0	5	2	0	4	2	4	0
		F	5	0	0	0	1	0	1	2	1	0
		T	22	0	0	5	3	0	5	4	5	0
		%	3.8	--	--	3.6	2.3	--	6.4	8.9	10.0	--
Firearms & Explosives	E955	M	142	1	9	39	28	16	19	12	14	4
		F	20	0	2	2	6	5	3	2	0	0
		T	162	1	11	41	34	21	22	14	14	4
		%	28.1	50.0	34.4	29.3	26.2	25.9	28.2	31.1	28.0	21.1
Cutting & Piercing Instruments	E956	M	6	0	0	2	4	0	0	0	0	0
		F	1	0	0	0	0	0	0	0	1	0
		T	7	0	0	2	4	0	0	0	1	0
		%	1.2	--	--	1.4	3.1	--	--	--	2.0	--
Jumping from high places	E957	M	22	0	0	10	5	2	0	2	2	1
		F	6	0	0	0	4	0	0	1	0	1
		T	28	0	0	10	9	2	0	3	2	2
		%	4.8	--	--	7.1	6.9	2.5	--	6.7	4.0	10.5
Other & Unspecified Means	E958	M	21	0	0	5	8	1	2	0	2	3
		F	1	0	0	1	0	0	0	0	0	0
		T	22	0	0	6	8	1	2	0	2	3
		%	3.8	--	--	4.3	6.2	1.2	2.6	--	4.0	15.8

\*Percents do not sum to 100.0 due to rounding.

TABLE C-8  
MOTOR VEHICLE DEATHS BY TYPE  
MASSACHUSETTS RESIDENTS  
1987

Underlying Cause	ICD-9		Victim							
			Total	Driver	Passenger	Motor-cyclist	Passenger, Motorcycle	Pedestrian	Pedal Cyclist	Other & Unspec.
Total	E810-E825	M	543	246	93	47	3	103	13	38
		F	200	73	55	2	2	52	1	15
		T	743	319	148	49	5	155	14	53
		%*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Collision with another motor vehicle	E812	M	175	108	31	24	3	-- **	--	9
		F	77	43	29	1	--	--	--	4
		T	252	151	60	25	3	--	--	13
		%	33.9	47.3	40.5	51.0	60.0	--	--	24.5
Collision with another vehicle	E813	M	12	--	--	--	--	--	12	--
		F	1	--	--	--	--	--	1	--
		T	13	--	--	--	--	--	13	--
		%	1.7	--	--	--	--	--	92.9	--
Motor vehicle with pedestrian	E814	M	97	--	--	--	--	97	--	--
		F	50	--	--	--	--	50	--	--
		T	147	--	--	--	--	147	--	--
		%	19.8	--	--	--	--	94.8	--	--
Other motor vehicle collision/highway	E815	M	163	104	37	17	--	--	--	5
		F	45	22	21	--	1	--	--	1
		T	208	126	58	17	1	--	--	6
		%	28.0	39.5	39.2	34.7	20.0	--	--	11.3
Lost control without collision	E816	M	54	25	21	6	--	--	--	2
		F	12	6	3	--	1	--	--	2
		T	66	31	24	6	1	--	--	4
		%	8.9	9.7	16.2	12.2	20.0	--	--	7.5
Other non-collision motor vehicle	E818	M	6	3	3	--	--	--	--	--
		F	3	--	1	1	--	--	--	1
		T	9	3	4	1	--	--	--	1
		%	1.2	0.9	2.7	2.0	--	--	--	1.9
Motor vehicle of unspecified nature	E819	M	21	3	--	--	--	--	1	17
		F	9	2	--	--	--	--	--	7
		T	30	5	--	--	--	--	1	24
		%	4.0	1.6	--	--	--	--	7.1	45.3
Motor-driven snow vehicle	E820	M	5	2	--	--	--	--	--	3
		F	--	--	--	--	--	--	--	--
		T	5	2	--	--	--	--	--	3
		%	0.7	0.6	--	--	--	--	--	5.7
Other off-road motor vehicle	E821	M	2	1	--	--	--	--	--	1
		F	--	--	--	--	--	--	--	--
		T	2	1	--	--	--	--	--	1
		%	0.3	0.3	--	--	--	--	--	1.9
Oth. motor veh. nontraffic collision with moving object	E822	M	5	--	--	--	--	5	--	--
		F	1	--	--	--	--	1	--	--
		T	6	--	--	--	--	6	--	--
		%	0.8	--	--	--	--	3.9	--	--
Oth. involving collision with stationary object	E823	M	--	--	--	--	--	--	--	--
		F	2	--	1	--	--	1	--	--
		T	2	--	1	--	--	1	--	--
		%	0.3	--	0.7	--	--	0.6	--	--
Oth. motor veh. nontraffic other & unspecified nature	E825	M	3	--	1	--	--	1	--	1
		F	--	--	--	--	--	--	--	--
		T	3	--	1	--	--	1	--	1
		%	0.4	--	0.7	--	--	0.6	--	1.9

\*Percents may not sum to 100.0 due to rounding.

\*\*-- are equal to zero.

FIGURE C-3

# Motor Vehicle Deaths

Age-specific Rates

Massachusetts: 1987

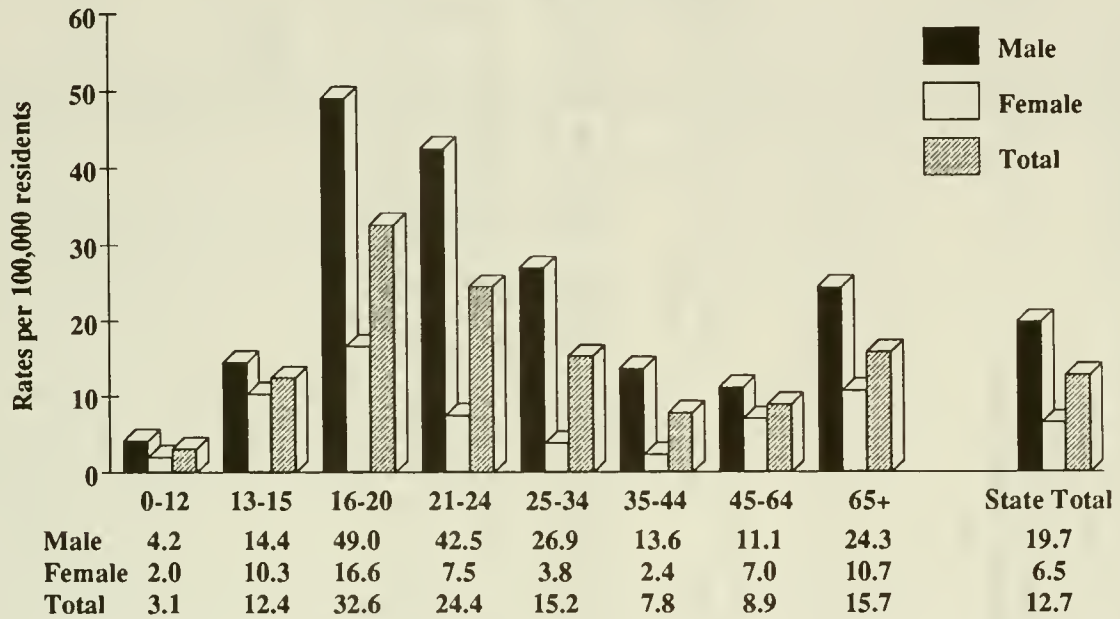


TABLE C-9

AIDS AND HIV - RELATED DEATHS  
BY CAUSE, SEX AND RACE  
MASSACHUSETTS RESIDENT DEATHS  
1987

	AIDS and AIDS-related Deaths	Conditions (ICD-9)			Sex		Race			Age (in years)					Place of Occurrence			
		AIDS 042	AIDS-like syndrome 043	Other HIV infection 044	Male	Female	White	Black	Other	<14	14-24	25-34	35-44	45+	At Home	Hospital	En Route	Out of State
Number	241	233	3	5	209	32	190	50	1	5	8	105	78	45	26	207	3	5
Percent	100.0	96.7	1.2	2.1	86.7	13.3	78.8	20.8	0.4	2.1	3.3	43.6	32.3	18.7	10.8	85.9	1.2	2.1



TABLE C-10  
ATHEROSCLEROSIS, HYPERTENSIVE DISEASE AND DIABETES  
UNDERLYING CAUSE AND MENTIONED CONDITIONS BY AGE GROUP AND SEX  
MASSACHUSETTS RESIDENTS  
1987

Age	Sex	# of Deaths	Atherosclerosis (440)			Hypertensive Disease (401-405)			Diabetes Mellitus (250)		
			Under-lying Cause	Mentioned Conditions	Total % of Deaths	Under-lying Cause	Mentioned Conditions	Total % of Deaths	Under-lying Cause	Mentioned Conditions	Total % of Deaths
	Total	55,562*	727	1,662	<u>2,389</u> 4.3	630	2,682	<u>3,312</u> 6.0	848	3,455	<u>4,303</u> 7.7
	Male	27,036	258	642	<u>900</u> 3.3	263	1,075	<u>1,338</u> 4.9	363	1,559	<u>1,922</u> 7.1
	Female	28,524	469	1,020	<u>1,489</u> 5.2	367	1,607	<u>1,974</u> 6.9	485	1,896	<u>2,381</u> 8.3
0-39	Total	3,340	2	2	<u>4</u> 0.1	6	15	<u>21</u> 0.6	38	16	<u>54</u> 1.6
	Male	2,315	2	2	<u>4</u> 0.2	3	12	<u>15</u> 0.6	18	11	<u>29</u> 1.2
	Female	1,025	--**	--	--	3	3	<u>6</u> 0.6	20	5	<u>25</u> 2.4
40-49	Total	1,839	1	9	<u>10</u> 0.5	17	54	<u>71</u> 3.9	26	58	<u>84</u> 4.6
	Male	1,144	1	7	<u>8</u> 0.7	9	37	<u>46</u> 4.0	20	35	<u>55</u> 4.8
	Female	695	--	2	<u>2</u> 0.3	8	17	<u>25</u> 3.6	6	23	<u>29</u> 4.2
50-59	Total	4,046	4	53	<u>57</u> 1.4	37	174	<u>211</u> 5.2	71	233	<u>304</u> 7.5
	Male	2,560	2	43	<u>45</u> 1.8	26	121	<u>147</u> 5.7	41	152	<u>193</u> 7.5
	Female	1,486	2	10	<u>12</u> 0.8	11	53	<u>64</u> 4.3	30	81	<u>111</u> 7.5
60-69	Total	9,639	50	177	<u>227</u> 2.4	115	541	<u>656</u> 6.8	165	719	<u>884</u> 9.2
	Male	5,782	32	117	<u>149</u> 2.6	74	285	<u>359</u> 6.2	86	408	<u>494</u> 8.5
	Female	3,857	18	60	<u>78</u> 2.0	41	256	<u>297</u> 7.7	79	311	<u>390</u> 10.1
70-79	Total	14,844	143	395	<u>538</u> 3.6	175	807	<u>982</u> 6.6	236	1,139	<u>1,375</u> 9.3
	Male	7,814	74	210	<u>284</u> 3.6	92	356	<u>448</u> 5.7	116	550	<u>666</u> 8.5
	Female	7,030	69	185	<u>254</u> 3.6	83	451	<u>534</u> 7.6	120	589	<u>709</u> 10.1
≥80	Total	21,852	527	1,026	<u>1,553</u> 7.1	280	1,091	<u>1,371</u> 6.3	312	1,290	<u>1,602</u> 7.3
	Male	7,422	147	263	<u>410</u> 5.5	59	264	<u>323</u> 4.4	82	403	<u>485</u> 6.5
	Female	14,430	380	763	<u>1,143</u> 7.9	221	827	<u>1,048</u> 7.3	230	887	<u>1,117</u> 7.7

\*Total includes 2 deaths of unknown sex and 2 deaths of unknown age.

\*\*-- equal to zero.

FIGURE C - 4

## Heart Disease Deaths by Race & Sex

Age-adjusted Rates  
Massachusetts: 1970 - 1987

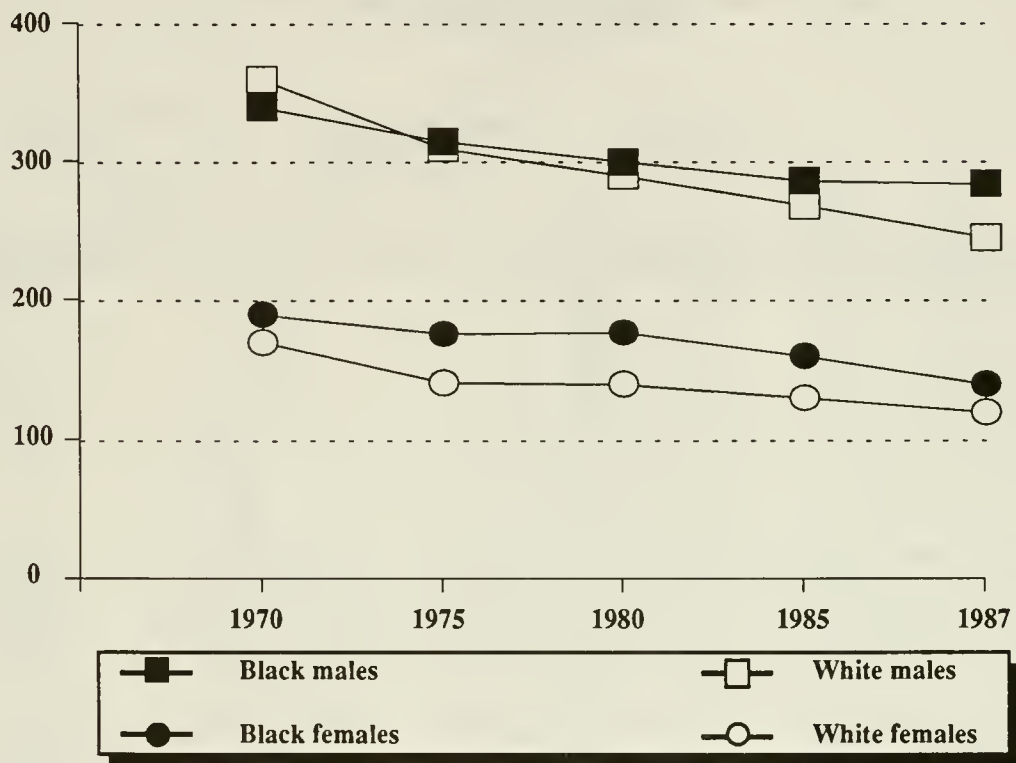


TABLE C-11  
MALIGNANT NEOPLASM DEATHS  
AGE-ADJUSTED RATES  
MASSACHUSETTS RESIDENT DEATHS  
1987

Cause		Total*		Male		Female	
		Rate	Number	Rate	Number	Rate	Number
Total Deaths	ICD-9	527.8	55,562	700.7	27,036	402.0	28,524
Total Malignant Neoplasm Deaths (Underlying Cause)	140-208	138.1	13,265	174.2	6,686	115.5	6,579
Esophagus	150	3.2	294	5.7	207	1.4	87
Stomach	151	4.2	437	6.5	250	2.7	187
Colon, rectum, rectosigmoid junction, and anus	153-154	16.5	1,773	21.2	847	13.4	926
Pancreas	157	6.4	633	7.5	280	5.6	353
Trachea, bronchus, and lung	162	35.8	3,237	54.8	2,058	23.1	1,179
Female breast	174	14.8	1,302	--**	--	26.1	1,302
Ovary and other uterine adnexa	183	3.8	346	--	--	6.7	346
Prostate	185	5.5	695	15.2	695	--	--
Brain	191	3.4	270	4.6	153	2.3	117
Lymphosarcoma & reticulosarcoma, Hodgkin's disease, and other malignant neoplasms of lymphoid & histiocytic tissue	200-202	5.2	493	6.5	236	4.2	257
All other malignant neoplasms	Residual	39.0	3,785	52.0	1,960	17.7	1,825

\*Total includes 2 deaths of unknown sex.

\*\* -- equal zero events.

TABLE C-12  
MEDICAL EXAMINER CERTIFIED DEATHS  
BY CAUSE, RACE, SEX AND AGE  
MASSACHUSETTS OCCURRENCE  
1987

AGE	RACE/SEX	Total Deaths Certified by M.E.	Motor Vehicle Injuries (810-825)	Suicide (950-959)	Homicide (960-969)	Legal Intervention/Undeter. Inj. (970-999)	All Other Injuries (800-807, 826-949)	Non-violent Causes (000-778)	Ill-Defined & Unknown Causes (780-796)
Total	White M	5,908	495	402	76	130	393	4,275	137
	F	3,701	188	137	54	41	162	3,045	74
	Non-W M	414	23	20	51	18	31	245	26
	F	210	7	8	20	8	11	135	21
	Total*	10,235*	713	567	201	198**	597	7,701***	258
<1	White M	58	1	--	--	1	5	16	35
	F	31	2	--	2	--	2	8	17
	Non-W M	6	--	--	--	--	--	2	4
	F	18	--	--	--	--	1	5	12
	Total	113	3	--	2	1	8	31	68
1-4	White M	28	2	--	--	1	11	9	5
	F	11	--	--	2	--	5	4	--
	Non-W M	3	--	--	--	--	--	3	--
	F	1	--	--	--	--	1	--	--
	Total	43	2	--	2	1	17	16	5
5-9	White M	29	10	--	1	--	14	3	1
	F	4	3	--	1	--	--	--	--
	Non-W M	4	--	--	--	--	3	--	1
	F	--	--	--	--	--	--	--	--
	Total	37	13	--	2	--	17	3	2
10-14	White M	31	15	2	--	--	5	6	3
	F	19	12	--	1	--	2	4	--
	Non-W M	3	1	--	1	--	1	--	--
	F	2	1	--	--	--	--	--	1
	Total	55	29	2	2	--	8	10	4
15-19	White M	141	79	25	2	2	23	7	3
	F	52	28	6	5	1	3	6	3
	Non-W M	19	1	2	13	--	2	1	--
	F	5	2	--	3	--	--	--	--
	Total	217	110	33	23	3	28	14	6
20-29	White M	507	180	112	26	38	75	56	20
	F	117	31	17	12	18	8	22	9
	Non-W M	46	8	5	15	4	4	6	4
	F	25	1	3	10	2	2	5	2
	Total	695	220	137	63	62	89	89	35
30-39	White M	472	74	82	20	57	61	142	36
	F	149	13	31	16	10	12	51	16
	Non-W M	77	4	7	14	12	7	24	9
	F	29	2	3	2	4	--	14	4
	Total	727	93	123	52	83	80	231	65
40-44	White M	253	18	32	6	14	21	150	12
	F	81	7	13	3	3	9	43	3
	Non-W M	28	3	--	2	2	8	9	4
	F	13	--	--	3	1	2	6	1
	Total	375	28	45	14	20	40	208	20
45-49	White M	249	9	20	6	5	18	186	5
	F	97	7	15	4	3	3	62	3
	Non-W M	24	3	--	--	--	3	17	1
	F	12	--	1	2	--	2	6	1
	Total	382	19	36	12	8	26	271	10

\*Total includes two males of unknown race.

\*\*Total for this category includes one male of unknown race.

\*\*\*Total for this category includes one male of unknown race and age.

Of the 624 non-white deaths certified by medical examiners, 545 were black and 79 were classified as Asian or other.

-- are equal to zero events.

TABLE C-12 (continued)  
MEDICAL EXAMINER CERTIFIED DEATHS  
BY CAUSE, RACE, SEX AND AGE  
MASSACHUSETTS OCCURRENCE  
1987

AGE	RACE/SEX		Total Deaths Certified by M.E.	Motor Vehicle Injuries (810-825)	Suicide (950-959)	Homicide (960-969)	Legal Intervention/ Undeter. Inj. (970-999)	All Other Injuries (800-807, 826-949)	Non-violent Causes (000-778)	Ill Defined & Unknown Causes (780-796)
50-54	White	M	307	10	26	3	2	15	250	1
		F	123	11	12	1	1	4	87	7
	Non-W	M	30	1	2	5	--	--	21	1
		F	7	--	--	--	--	--	7	--
	Total		468	22	40	9	4**	19	365	9
55-59	White	M	435	12	26	5	1	20	371	--
		F	160	7	9	3	1	6	131	3
	Non-W	M	31	--	2	1	--	1	26	1
		F	11	--	--	--	--	--	11	--
	Total		637	19	37	9	2	27	539	4
60-64	White	M	584	15	15	2	3	27	519	3
		F	244	14	8	1	1	4	215	1
	Non-W	M	33	1	--	--	--	1	30	1
		F	12	1	--	--	--	--	11	--
	Total		873	31	23	3	4	32	775	5
65-69	White	M	720	16	12	4	2	20	660	6
		F	388	10	8	--	1	14	353	2
	Non-W	M	35	--	--	--	--	--	35	--
		F	17	--	--	--	--	2	15	--
	Total		1,160	26	20	4	3	36	1,063	8
70-74	White	M	671	12	20	--	1	22	615	1
		F	440	12	9	1	1	11	404	2
	Non-W	M	25	--	1	--	--	--	24	--
		F	15	--	--	--	1	--	14	--
	Total		1,151	24	30	1	3	33	1,057	3
75-79	White	M	613	21	17	--	3	22	546	4
		F	545	15	5	1	1	18	502	3
	Non-W	M	23	1	--	--	--	1	21	--
		F	16	--	--	--	--	1	15	--
	Total		1,197	37	22	1	4	42	1,084	7
≥80	White	M	810	21	13	1	--	34	739	2
		F	1,240	16	4	1	--	61	1,153	5
	Non-W	M	27	--	1	--	--	--	26	--
		F	27	--	1	--	--	--	26	--
	Total		2,104	37	19	2	--	95	1,944	7

\*\*Total for this category includes one male of unknown race.

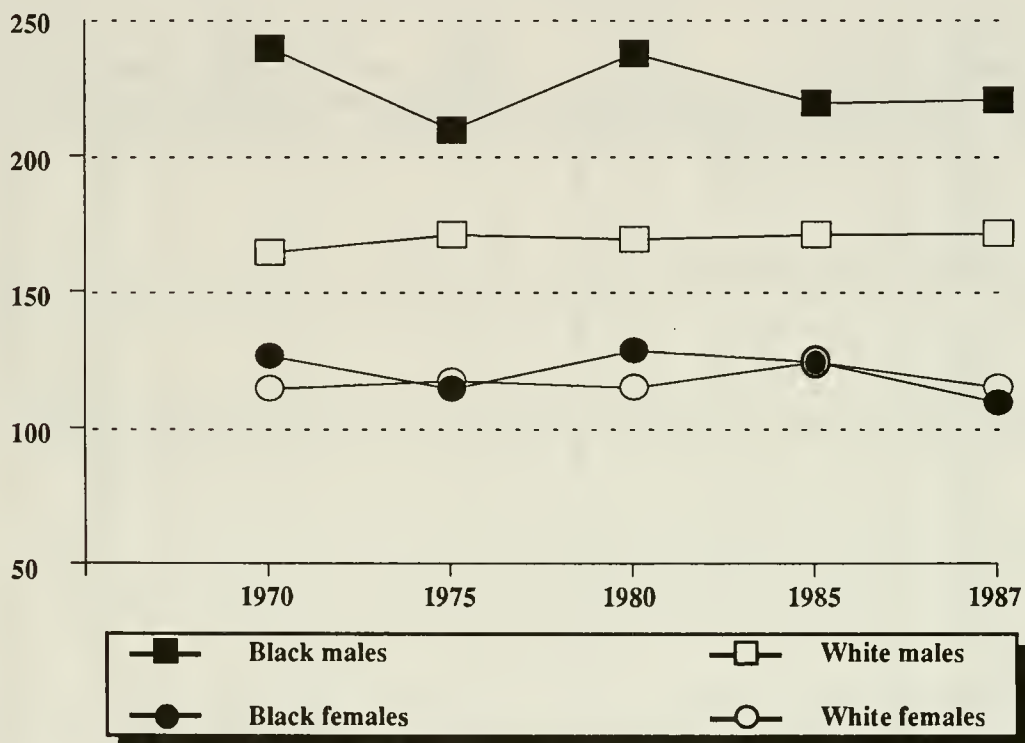


FIGURE C - 5

## Malignant Neoplasm Deaths by Race & Sex

Age-adjusted Rates

Massachusetts: 1970 - 1987



**FIGURE C - 6**  
**Medical Examiner Certified Deaths**  
**Occurrence Deaths**  
Massachusetts: 1987

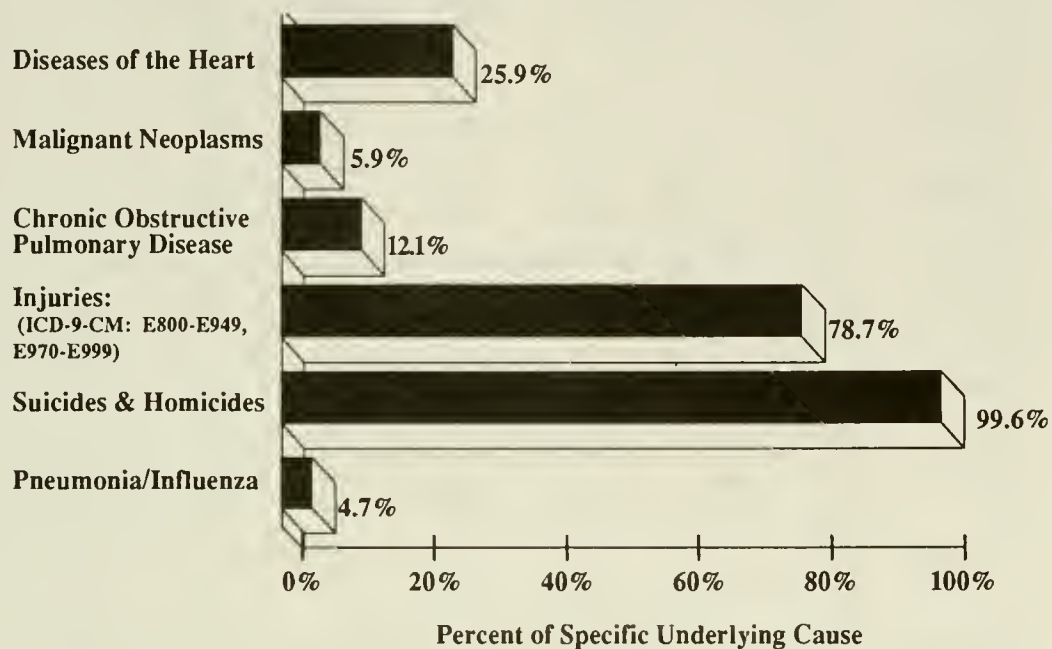


TABLE C-13  
MEDICAL EXAMINER CERTIFIED DEATHS BY COUNTY  
MASSACHUSETTS OCCURRENCE  
1987

County		Population	Occurrence Deaths	Medical Examiner Certified*	Referred-- Not Cert. By M.E.*	Natural Cause Deaths Cert. by M.E.**
TOTAL	# % R	5,845,118 100.0 --	56,190 100.0 --	10,235 18.2 --	6,223 11.1 --	7,701 75.2 --
Barnstable	# % R	173,737 3.0 9	2,110 3.8 9	469 22.2 3	123 5.8 12	377 80.4 4
Berkshire	# % R	141,700 2.4 11	1,625 2.9 10	214 13.2 10	212 13.0 5	146 68.2 10
Bristol	# % R	488,574 8.4 6	4,256 7.6 7	903 21.2 5	262 6.2 10	708 78.4 5
Dukes	# % R	11,071 0.2 13	98 0.2 13	29 29.6 2	2 2.0 14	22 75.9 7
Essex	# % R	644,209 11.0 4	6,140 10.9 4	1,306 21.3 4	241 3.9 13	1,057 80.9 3
Franklin	# % R	66,337 1.1 12	577 1.0 12	105 18.2 7	34 5.9 11	76 72.4 8
Hampden	# % R	441,426 7.5 7	4,866 8.6 5	697 14.3 9	730 15.0 3	492 70.6 9
Hampshire	# % R	145,543 2.5 10	878 1.6 11	170 19.4 6	120 13.7 4	123 72.4 8
Middlesex	# % R	1,366,463 23.4 1	11,419 20.3 1	2,434 21.3 4	923 8.1 7	2,000 82.2 2
Nantucket	# % R	5,991 0.1 14	65 0.1 14	8 12.3 12	5 7.7 9	5 62.5 11
Norfolk	# % R	604,304 10.3 5	4,754 8.5 6	799 16.8 8	516 10.8 6	611 76.5 6
Plymouth	# % R	436,218 7.5 8	3,085 5.5 8	1,020 33.1 1	278 9.0 8	843 82.6 1
Suffolk	# % R	659,115 11.3 3	9,930 17.7 2	1,294 13.0 11	1,749 17.6 1	795 61.4 12
Worcester	# % R	660,430 11.3 2	6,387 11.4 3	787 12.3 12	1,028 16.1 2	446 56.7 13

\*The percentage and rank of medical examiner certified deaths and referred, but not certified by medical examiners are based on the total occurrence deaths.

\*\*The percentage and rank of natural cause deaths certified by medical examiners is based on the total number of medical examiner certified deaths for the county.



TABLE C-14A  
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE  
1987

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
ABINGTON	43	29	4	0	6	3	2	5	2	2	3	21	120
ACTION	23	16	7	2	4	3	2	3	1	0	0	13	74
ACUSHNET	20	24	2	2	1	3	1	2	2	4	0	8	69
ADAMS	58	37	10	0	1	6	7	2	1	0	2	17	141
AGAMAM	97	59	17	2	1	11	10	3	2	7	2	39	250
ALFORD	0	1	0	0	0	0	0	0	0	0	0	0	1
AMESBURY	55	32	5	7	2	8	4	1	1	2	2	24	143
AMHERST	44	27	13	3	4	7	2	2	0	0	5	17	124
ANDOVER	66	56	12	4	1	4	6	4	2	4	0	29	188
ARLINGTON	159	137	33	5	12	32	17	10	5	8	4	51	473
ASHBURNHAM	8	13	3	1	2	1	2	0	2	0	0	11	43
ASHBY	6	7	2	0	0	1	0	0	1	0	0	3	20
ASHFIELD	6	2	2	0	0	0	0	0	0	0	0	3	13
ASHLAND	19	19	2	3	1	2	3	1	3	0	0	10	63
ATHOL	42	36	10	1	0	5	5	4	0	3	1	27	134
ATTLEBORO	99	75	45	5	9	13	11	4	6	4	0	43	314
AUBURN	43	36	7	1	1	1	1	2	1	0	0	21	114
AVON	16	11	2	0	0	1	0	0	0	0	1	4	35
AYER	17	10	6	2	3	1	1	2	3	0	1	23	69
BARNSTABLE	149	124	46	2	11	22	13	12	3	13	1	86	482
BARRE	17	14	1	1	0	2	1	0	0	0	0	9	45
BECKET	2	1	0	2	0	1	0	0	0	0	0	1	7
BEDFORD	35	34	14	1	3	5	4	2	1	1	1	24	125
BELCHERTOWN	27	16	6	1	1	2	2	2	1	0	0	11	69
BELLINGHAM	21	16	6	2	1	1	4	1	0	0	0	12	63
BELMONT	93	69	15	2	5	26	9	1	5	3	0	53	281
BERKLEY	4	6	1	0	0	1	0	0	0	0	2	4	18
BERLIN	6	5	2	1	0	0	1	0	0	0	0	4	19
BERNARDSTON	8	3	0	0	0	1	1	0	0	0	0	0	13
BEVERLY	144	93	36	3	7	33	11	11	4	6	6	67	421
BILLERICA	68	70	10	9	2	4	9	5	2	5	5	35	224
BLACKSTONE	36	15	5	1	0	1	1	2	0	1	3	7	72
BLANDFORD	2	0	0	0	0	0	0	1	0	0	0	1	4
BOLTON	2	3	2	1	2	0	0	1	0	0	0	1	12
BOSTON	1853	1207	325	44	123	249	164	77	106	31	65	1281	5525
BOURNE	42	57	11	3	4	8	6	2	2	0	1	28	164
BOXBOROUGH	2	1	1	0	0	0	0	0	0	0	0	2	6
BOXFORD	9	8	1	0	0	0	0	0	0	2	0	3	23
BOYLSTON	19	9	2	0	1	5	0	0	0	1	1	3	41
BRAINTREE	144	95	33	8	4	19	13	5	3	1	4	49	378



BREWSTER	29	24	2	1	3	5	3	1	2	5	2	11	88
BRIDGEMATER	49	25	4	2	1	8	2	0	1	1	1	24	118
BRIMFIELD	9	4	2	1	1	1	1	0	0	0	0	4	23
BROCKTON	342	193	56	13	15	50	32	13	18	5	10	154	901
BROOKFIELD	10	8	1	1	0	3	3	0	0	0	0	8	34
BROOKLINE	175	147	52	3	13	31	13	10	1	0	5	114	564
BUCKLAND	5	8	1	0	0	0	1	0	1	0	0	1	17
BURLINGTON	36	35	14	5	3	7	2	1	3	0	1	17	124
CAMBRIDGE	265	185	38	10	18	45	24	15	7	7	7	162	783
CANTON	66	46	16	1	2	12	5	1	2	3	3	21	178
CARLISLE	7	6	0	0	0	0	1	1	1	1	0	3	20
CARVER	35	18	1	2	1	6	2	0	0	0	2	17	84
CHARLEMONT	5	3	2	0	1	0	0	0	0	0	0	2	13
CHARLTON	49	13	5	1	1	3	2	0	0	2	0	12	88
CHATHAM	43	29	9	0	1	3	2	0	2	7	1	16	113
CHELMSFORD	74	44	19	5	2	7	9	4	3	5	2	38	212
CHELSEA	118	65	26	1	4	20	11	9	8	0	2	72	336
CHESHIRE	9	5	1	1	0	0	0	0	1	0	0	5	22
CHESTER	1	1	0	1	0	1	0	0	0	0	0	3	7
CHESTERFIELD	4	0	1	0	0	0	0	0	0	0	0	2	7
CHICOPEE	239	158	47	5	11	28	16	5	10	7	8	95	629
CHILMARK	1	3	0	0	0	0	0	0	0	0	0	1	5
CLARKSBURG	6	1	1	0	0	0	0	0	0	0	0	3	12
CLINTON	52	40	8	2	1	2	5	1	3	1	1	25	141
COHASSET	26	12	9	2	1	4	2	0	5	0	0	16	77
COLRAIN	5	4	0	1	0	1	0	0	1	1	0	4	17
CONCORD	42	26	17	2	2	8	7	1	1	3	2	22	133
CONWAY	6	0	1	0	0	0	1	0	0	0	0	2	10
CUMMINGTON	3	1	1	1	0	0	0	0	0	0	0	1	7
DALTON	40	13	5	2	0	6	4	4	0	3	1	8	86
DANVERS	109	65	12	4	2	15	8	0	6	2	1	34	258
DARTMOUTH	65	59	16	3	1	9	7	1	1	13	3	29	207
DEDHAM	76	75	22	3	5	12	9	3	2	4	3	42	256
DEERFIELD	14	7	4	2	1	0	1	1	0	0	1	11	42
DENNIS	49	67	23	0	5	4	10	6	1	10	2	27	204
DIGHTON	26	9	2	1	2	2	1	0	0	0	2	8	53
DOUGLAS	17	7	1	2	0	0	3	0	0	0	1	6	37
DOVER	14	9	5	0	1	1	0	0	0	0	0	3	33
DRACUT	68	45	14	5	2	2	6	4	4	4	1	23	178
DUDLEY	23	18	6	1	1	4	3	2	2	0	0	13	73
DUNSTABLE	2	4	1	1	0	0	0	0	0	0	0	0	8
DUXBURY	31	30	10	3	1	4	3	0	2	3	1	23	111
EAST BRIDGEMATER	29	19	3	2	1	4	3	0	1	2	0	13	77
EAST BROOKFIELD	10	2	0	0	0	1	0	0	0	0	0	2	15
EAST LONGMEADOW	50	37	10	2	2	2	7	3	0	5	0	32	150
EASTHAM	13	13	2	2	1	3	0	1	0	1	1	5	42
EASTHAMPTON	49	30	5	2	2	5	6	3	1	1	2	26	132
EASTON	34	26	11	0	0	4	4	3	1	3	1	12	99
EDGARTOWN	9	5	3	1	0	1	2	1	0	0	0	4	26
EGREMONT	7	4	0	0	0	1	0	1	0	0	0	2	15

TABLE C-14A (CONTINUED)  
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE  
1987

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS (810-825)	OTHER ACCIDENTS (800-807, 826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
ERVING	5	2	2	0	0	2	0	0	0	0	0	0	11
ESSEX	8	8	4	1	0	0	0	0	0	0	0	4	25
EVERETT	156	120	22	3	2	20	19	1	2	2	4	77	428
FAIRHAVEN	77	54	13	2	1	5	10	5	5	10	0	35	217
FALL RIVER	464	227	99	11	26	29	38	20	19	41	4	125	1103
FALMOUTH	96	81	25	7	7	9	10	4	4	1	4	43	291
FITCHBURG	149	110	29	9	11	13	8	10	7	3	3	73	425
FLORIDA	3	1	0	0	0	1	0	0	0	0	0	2	7
FOXBOROUGH	42	33	6	2	0	4	4	1	2	2	4	20	120
FRAMINGHAM	193	134	49	5	10	31	18	8	2	1	2	113	566
FRANKLIN	43	33	4	1	4	11	6	2	0	0	0	19	123
FREETOWN	8	14	2	0	2	1	1	2	0	1	2	9	42
GARDNER	78	51	19	5	7	12	11	3	6	2	5	43	242
GAY HEAD	0	0	0	0	0	0	0	0	0	0	0	0	0
GEORGETOWN	14	10	5	2	0	1	2	2	1	1	0	4	42
GILL	3	5	1	0	0	1	3	1	0	1	0	1	16
GLOUCESTER	103	70	20	2	7	11	15	5	5	1	0	50	289
GOSHEN	1	0	0	0	0	1	0	0	0	0	0	0	2
GOSNOLD	1	1	0	0	0	0	0	0	0	0	0	0	2
GRAFTON	56	26	7	4	2	3	0	0	0	0	0	10	108
GRANBY	11	9	4	2	1	0	3	0	0	1	0	5	36
GRANVILLE	3	2	2	0	0	0	0	0	0	1	0	1	9
GREAT BARRINGTON	35	21	13	0	3	7	2	4	1	6	2	22	116
GREENFIELD	85	46	21	7	3	15	9	3	0	5	1	35	230
GROTON	11	5	0	1	1	3	1	2	0	0	0	7	31
GROVELAND	9	11	2	1	0	0	4	0	0	1	1	3	32
HADLEY	18	8	3	0	0	1	2	0	1	2	0	6	41
HALIFAX	22	11	7	3	1	2	4	2	0	0	0	10	62
HAMILTON	21	8	2	0	2	2	1	1	1	0	1	9	48
HAMPDEN	17	6	4	1	1	1	5	1	1	1	0	5	43
HANCOCK	3	2	0	0	0	0	0	0	0	0	0	0	5
HANOVER	32	16	9	3	2	4	4	2	3	0	2	10	87
HANSON	17	23	6	1	2	2	3	1	0	0	0	6	61
HARDWICK	8	5	0	0	0	1	4	0	0	1	0	4	23
HARVARD	10	12	1	1	1	0	0	0	0	0	0	3	28
HARMICH	38	35	16	3	2	6	5	5	1	17	1	19	148
HATFIELD	6	13	2	1	1	0	0	0	0	0	0	7	30
HAVERHILL	219	114	36	9	12	17	14	5	7	27	6	82	548
HAWLEY	1	0	0	0	0	0	0	0	1	0	0	0	2
HEATH	2	1	0	1	0	0	0	0	0	0	0	0	4

HINGHAM	68	44	15	2	7	8	5	1	4	0	2	23	179
HINSDALE	11	7	0	1	0	0	0	0	0	1	0	6	26
HOLBROOK	40	15	6	1	0	8	6	0	1	0	2	13	92
HOLDEN	32	23	6	3	1	3	2	0	0	1	1	25	97
HOLLAND	2	4	0	1	0	0	0	0	0	0	0	0	7
HOLLISTON	23	15	2	2	1	2	2	0	0	0	3	12	62
HOLYOKE	249	116	49	6	16	30	28	6	14	8	2	80	604
HOPEDALE	15	16	3	0	3	0	1	1	1	0	0	9	49
HOPKINTON	21	12	2	1	0	2	2	0	0	0	1	7	48
HUBBARDSTON	8	2	1	0	0	1	0	1	0	0	0	3	16
HUDSON	50	35	6	4	4	5	3	3	1	0	1	17	129
HULL	30	20	7	0	1	4	1	2	2	0	0	14	81
HUNTINGTON	4	0	0	0	0	0	0	0	0	0	0	1	5
IPSWICH	43	38	10	0	1	11	7	2	4	1	1	13	131
KINGSTON	29	16	3	1	0	1	1	2	0	2	1	4	60
LAKEVILLE	20	10	6	3	0	2	2	2	0	1	1	10	57
LANCASTER	9	4	3	1	0	3	2	0	0	1	0	3	26
LANESBOROUGH	6	7	0	1	0	0	2	0	1	0	0	1	18
LAWRENCE	269	149	49	6	11	30	24	19	14	4	8	111	694
LEE	28	16	3	1	3	3	0	0	4	0	0	9	67
LEICESTER	18	19	1	1	1	0	4	2	1	0	2	7	56
LENOX	49	20	4	1	1	4	3	1	1	1	1	12	98
LEOMINSTER	97	90	32	4	9	14	10	6	3	0	6	51	322
LEVERETT	3	4	0	0	0	0	0	0	0	0	0	0	7
LEXINGTON	69	75	14	4	6	9	12	4	3	2	4	43	245
LEYDEN	1	0	0	0	0	0	0	0	0	0	0	2	3
LINCOLN	7	6	4	0	2	2	1	0	1	0	3	3	29
LITTLETON	18	11	7	2	1	5	2	1	0	2	0	13	62
LONGMEADOW	62	27	12	0	4	3	5	2	0	1	0	17	133
LOWELL	371	219	68	21	22	38	32	24	22	15	14	188	1034
LUDLOW	70	39	8	3	2	2	6	2	3	2	5	24	166
LUNENBURG	22	15	3	1	0	2	2	1	1	0	0	16	63
LYNN	353	225	44	5	12	36	40	8	16	2	6	139	886
LYNNFIELD	24	13	2	1	4	3	2	0	2	0	1	14	66
MALDEN	230	175	35	3	12	33	31	5	11	4	6	99	644
MANCHESTER	12	8	5	0	3	5	5	4	1	0	0	10	53
MANSFIELD	31	32	10	0	1	6	2	1	4	1	0	13	101
MARBLEHEAD	75	38	10	0	0	9	4	0	2	0	6	39	183
MARION	17	15	3	0	0	0	0	0	0	1	1	7	43
MARLBOROUGH	83	59	14	2	4	14	11	1	2	2	3	70	265
MARSHFIELD	54	32	8	2	4	7	8	2	2	0	3	19	141
MASHPEE	14	11	4	0	2	3	2	1	2	1	1	12	53
MATTAPOISETT	14	16	4	2	1	3	1	0	1	2	0	7	51
MAYNARD	32	26	7	3	3	1	4	0	2	0	1	20	99
MEDFIELD	22	19	2	0	2	2	0	1	1	1	2	13	65
MEDFORD	253	158	27	3	8	47	23	8	7	2	2	100	638
MEDWAY	18	27	2	2	1	0	2	1	2	0	0	4	59
MELROSE	125	72	22	2	5	22	7	5	8	3	2	41	314
MENDON	8	7	1	1	0	1	0	0	1	0	0	6	25
MERRIMAC	12	9	2	0	1	1	2	1	0	0	0	2	30

TABLE C-14A (CONTINUED)  
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE  
1987

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
METHUEN	170	87	20	9	5	15	18	4	2	6	2	52	390
MIDDLEBOROUGH	69	28	8	2	3	5	7	5	2	3	1	27	160
MIDDLEFIELD	1	0	0	0	0	0	0	1	0	0	0	0	2
MIDDLETON	20	14	4	2	0	0	1	1	0	0	0	4	46
MILFORD	83	46	7	6	5	8	7	3	3	0	2	38	208
MILLBURY	39	23	7	3	2	4	2	1	2	1	0	23	107
MILLIS	9	15	1	0	2	5	0	0	1	1	1	10	45
MILLVILLE	8	3	0	0	1	0	0	1	0	0	0	2	15
MILTON	112	81	23	6	4	19	8	5	5	0	3	50	316
MONROE	1	1	0	0	0	0	0	0	0	0	0	0	2
MONSON	28	16	6	0	2	3	3	0	1	0	1	9	69
MONTAGUE	31	28	3	1	0	1	5	1	3	1	3	25	102
MONTERY	3	2	1	0	0	1	1	0	0	0	0	2	10
MONTGOMERY	1	0	0	0	0	0	0	0	0	0	0	1	2
MOUNT WASHINGTON	0	0	0	0	0	0	0	0	0	0	0	0	0
NAHANT	11	12	3	0	0	2	1	2	0	0	0	8	39
NANTUCKET	24	13	5	1	2	3	4	2	1	1	0	10	66
NATICK	95	58	13	4	5	16	6	3	3	1	3	37	244
NEEDHAM	84	63	26	2	9	15	10	3	3	8	2	55	280
NEW ASHFORD	1	0	0	0	0	0	0	0	0	0	0	0	1
NEW BEDFORD	468	271	101	14	21	48	27	15	8	73	8	175	1229
NEW BRAINTREE	0	1	0	0	0	0	0	0	0	1	0	2	4
NEW MARLBOROUGH	0	1	0	1	0	1	1	0	0	0	0	0	4
NEW SALEM	2	2	0	0	0	1	0	0	0	0	0	1	6
NEWBURY	10	9	1	1	0	1	1	0	0	0	0	3	26
NEWBURYPORT	78	44	13	1	3	9	6	4	3	1	1	37	200
NEWTON	249	191	49	6	13	25	15	11	6	2	8	113	688
NORFOLK	13	8	4	1	0	0	2	1	0	0	0	5	34
NORTH ADAMS	91	36	15	1	5	10	11	3	4	0	4	26	206
NORTH ANDOVER	79	29	12	2	2	6	4	4	3	4	2	31	178
NORTH ATTLEBORO	51	40	24	4	5	6	6	5	3	1	3	23	171
NORTH BROOKFIELD	13	15	1	1	1	2	1	0	0	0	0	3	37
NORTH READING	38	23	4	0	2	4	2	0	2	0	0	14	89
NORTHAMPTON	96	59	31	4	3	14	9	9	5	0	4	53	287
NORTHBOROUGH	26	19	7	2	2	4	2	1	0	1	2	9	75
NORTHBRIDGE	46	28	5	0	2	7	3	4	1	0	0	31	127
NORTHFIELD	15	7	1	1	1	1	3	1	0	0	1	4	35
NORTON	33	13	10	1	4	7	1	0	1	2	1	9	82
NORWELL	21	10	3	0	2	3	2	0	3	0	0	11	55
NORWOOD	96	78	26	3	4	17	14	2	3	2	1	47	293





TABLE C-14A (CONTINUED)  
SELECTED CAUSES OF DEATH BY CITY AND TOWN OF RESIDENCE  
1987

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (950-959)	ALL OTHER CAUSES	TOTAL
SHREWSBURY	71	60	16	2	1	7	6	1	2	3	4	37	210
SHUTESBURY	0	0	1	0	0	1	0	0	0	0	0	2	4
SOMERSET	59	42	19	2	1	8	2	3	1	6	1	19	163
SOMERVILLE	282	177	35	9	8	34	30	17	9	7	9	127	744
SOUTH HADLEY	53	40	16	5	1	6	6	1	1	6	1	28	164
SOUTHAMPTON	11	1	1	1	0	1	2	0	1	0	0	6	24
SOUTHBOROUGH	10	7	2	0	1	2	0	3	1	0	0	6	32
SOUTHBURGH	78	34	12	5	4	5	6	5	4	2	1	23	179
SOUTHBIDGE	22	9	4	0	2	4	1	1	0	1	5	7	56
SOUTHWICK	40	16	5	2	1	4	5	2	1	0	3	13	92
SPENCER													
SPRINGFIELD	594	358	126	26	23	61	59	14	18	16	17	311	1623
STERLING	13	10	0	0	3	1	3	0	0	1	1	6	38
STOCKBRIDGE	8	10	0	1	0	2	1	1	0	0	1	2	26
STONEHAM	70	50	17	2	2	8	5	7	3	0	1	28	193
STOUGHTON	74	58	20	2	1	14	6	4	4	1	1	31	216
STOW	9	5	4	2	1	0	1	0	0	2	0	5	29
STURBRIDGE	23	14	2	4	0	3	1	2	2	1	0	10	62
SUDBURY	20	19	4	4	0	3	4	1	0	1	2	16	74
SUNDERLAND	5	8	3	0	0	1	0	0	0	0	0	3	20
SUTTON	9	4	2	0	1	1	2	0	0	0	0	4	23
SWAMPSCOTT	60	33	8	1	1	12	3	2	1	1	1	29	152
SWANSEA	46	19	5	4	0	1	5	5	0	4	1	17	107
TAUNTON	167	101	35	6	8	12	22	1	5	4	8	72	441
TEMPLETON	23	9	7	2	1	5	2	4	1	0	1	5	60
TEWKSBURY	63	47	3	4	2	7	10	8	3	0	1	27	175
TISBURY	16	11	2	0	0	2	1	1	0	1	0	2	36
TOLLAND	0	2	0	0	0	0	0	0	0	0	0	1	3
TOPSFIELD	8	9	3	1	1	1	1	1	1	0	0	7	33
TOWNSEND	12	11	2	1	0	2	2	2	2	0	0	11	45
TRURO	7	3	1	0	1	1	0	1	0	0	0	1	15
TYNGSBOROUGH	15	10	0	2	0	2	2	0	1	0	1	8	41
TRYINGHAM	1	0	0	0	1	1	0	0	0	0	0	0	3
UPTON	9	8	2	1	1	1	1	0	1	0	3	5	32
UXBRIDGE	29	16	1	3	3	3	2	0	0	1	1	19	78
WAKEFIELD	94	66	13	0	2	11	6	2	2	1	6	35	238
MALES	2	5	0	0	0	1	0	0	0	0	0	1	9
WALPOLE	38	43	8	4	3	4	4	1	2	0	4	20	131
WALTHAM	178	125	44	1	13	28	21	5	11	17	5	81	529
WARE	44	24	5	2	1	4	4	3	2	2	1	21	113
WAREHAM	90	43	7	3	0	6	9	6	2	1	3	29	199

WARREN	21	9	4	0	1	1	2	1	2	0	0	0	6	47
WARMICK	5	0	0	0	0	0	0	0	0	0	0	0	0	5
WASHINGTON	4	0	0	0	0	0	1	0	0	0	0	0	0	6
WATERTOWN	136	92	24	3	7	14	8	1	8	9	4	47	353	
WAYLAND	32	29	7	0	0	1	2	0	1	0	0	0	11	83
WEBSTER	63	41	8	5	5	6	7	2	1	2	0	0	42	182
WELLESLEY	78	55	15	2	2	9	6	2	3	2	3	25	202	
WELLFLEET	9	8	1	0	1	1	2	0	1	2	0	5	30	
WENDELL	2	0	0	0	0	0	0	0	0	0	0	0	2	
WENHAM	16	12	3	0	0	1	0	0	0	0	1	4	37	
WEST BOYLSTON	15	17	2	2	0	4	2	0	0	0	1	8	51	
WEST BRIDGEWATER	23	12	3	2	2	0	3	1	1	3	1	4	55	
WEST BROOKFIELD	20	10	1	0	0	1	0	0	0	0	0	11	43	
WEST NEWBURY	3	4	2	1	1	0	3	0	0	0	0	2	16	
WEST SPRINGFIELD	125	70	26	6	0	6	15	4	2	5	2	38	299	
WEST STOCKBRIDGE	4	1	0	0	0	0	1	0	0	0	0	0	6	
WEST TISBURY	6	4	1	0	0	0	0	0	0	0	0	1	13	
WESTBOROUGH	32	29	7	0	0	13	6	0	4	0	1	15	107	
WESTFIELD	105	71	22	4	9	13	8	3	3	16	6	55	315	
WESTFORD	27	18	3	3	2	4	5	1	0	1	1	14	79	
WESTHAMPTON	1	1	1	0	0	0	0	0	0	0	0	1	4	
WESTMINSTER	12	11	2	2	1	2	0	1	0	0	1	8	40	
WESTON	37	26	10	1	1	4	1	1	1	2	2	14	100	
WESTPORT	39	31	3	2	4	3	1	0	0	3	3	14	103	
WESTWOOD	35	27	14	1	0	7	2	2	0	1	3	22	114	
WEYMOUTH	181	132	34	7	10	14	24	8	13	6	1	75	505	
WHATELY	1	3	0	0	0	0	0	0	0	0	0	3	7	
WHITHAM	34	20	6	0	0	7	3	2	1	1	0	15	89	
WILBRAHAM	30	24	4	0	2	2	3	2	0	3	2	13	85	
WILLIAMSBURG	7	3	3	0	0	0	0	0	0	0	0	1	14	
WILLIAMSTOWN	35	18	11	0	4	5	3	1	2	1	0	12	92	
WILMINGTON	47	34	7	2	2	5	1	1	2	1	0	12	114	
WINCHENDON	20	18	8	1	0	2	2	2	1	0	2	28	84	
WINCHESTER	75	53	21	0	3	10	5	1	1	5	3	30	207	
WINDSOR	1	0	0	0	0	0	0	0	0	0	1	1	3	
WINTHROP	95	45	5	1	4	13	8	7	2	2	2	31	215	
WOBURN	116	86	24	7	2	12	13	5	6	8	2	33	314	
WORCESTER	674	396	100	14	38	90	71	32	16	25	26	388	1870	
WORTHINGTON	3	3	0	0	0	1	0	0	0	0	1	3	11	
WRENTHAM	18	16	7	1	0	3	2	2	0	0	0	16	65	
YARMOUTH	100	84	21	0	6	11	11	7	3	9	6	54	312	
STATE TOTAL	20106	13265	3777	743	983	2454	1890	848	773	727	577	9419	55562	

TABLE C-148  
SELECTED CAUSES OF DEATH BY COUNTY OF RESIDENCE  
1987

	HEART DISEASES (390-398, 402, 404-429)	MALIGNANT NEOPLASMS (140-209)	CEREBROVASCULAR DISEASE (430-438)	MOTOR VEHICLE ACCIDENTS(810-825)	OTHER ACCIDENTS (800-807,826-949)	INFLUENZA & PNEUMONIA (480-487)	CHRONIC OBSTRUCTIVE PULMONARY (490-496)	DIABETES MELLITUS (250)	CHRONIC LIVER DIS. & CIRRHOSIS (571)	ATHEROSCLEROSIS (440)	SUICIDE (959-959)	ALL OTHER CAUSES	TOTAL
BARNSTABLE	676	613	174	21	47	82	75	44	25	68	20	351	2196
BERKSHIRE	620	346	94	23	27	84	59	25	22	16	19	210	1545
BRISTOL	1765	1085	412	65	89	168	144	70	58	172	42	642	4712
DUKES	45	30	14	3	1	6	6	2	1	1	1	12	122
ESSEX	2486	1535	405	78	95	291	227	111	94	73	61	998	6454
FRANKLIN	255	153	49	15	7	27	29	9	7	8	7	117	683
HAMPDEN	1768	1043	347	59	77	173	170	52	56	75	50	757	4627
HAMPSHIRE	388	238	92	22	14	42	36	21	13	12	14	190	1082
MIDDLESEX	4269	3018	774	163	209	575	412	179	164	133	120	1998	12014
NANTUCKET	24	13	5	1	2	3	4	2	1	1	0	10	66
NORFOLK	1946	1442	450	70	88	266	183	79	74	41	51	926	5616
PLYMOUTH	1340	829	212	72	64	168	133	53	58	37	42	569	3577
SUFFOLK	2246	1423	374	48	142	304	199	96	126	35	76	1466	6535
WORCESTER	2278	1497	375	103	121	265	213	105	74	55	74	1173	6333
STATE TOTAL	20106	13265	3777	743	983	2454	1890	848	773	727	577	9419	55562

ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*001-139	I. INFECTIVE AND PARASITIC DISEASES	1067	541	526	955	473	482	112	68	44
001-009	INTestinal Infectious Diseases	15	3	12	14	2	12	1	1	0
004	OTHER SALMONELLA INFECTIONS	4	1	3	3	0	3	1	1	0
008	INTestinal Infections Due to Other Organisms	6	2	4	6	2	4	0	0	0
009	ILL-DEFINED Intestinal Infections	5	0	5	5	0	5	0	0	0
010-018	TUBERCULOSIS	21	13	8	18	11	7	3	2	1
011	PULMONARY	12	8	4	12	8	4	0	0	0
012	OTHER RESPIRATORY	2	1	1	2	1	1	0	0	0
015	BONES AND JOINTS	1	0	1	1	0	1	0	0	0
017	OTHER ORGANS	2	1	1	1	0	1	1	1	0
018	MILIARY	4	3	1	2	2	0	2	1	1
020-027	ZOONOTIC BACTERIAL DISEASES	1	1	0	1	1	0	0	0	0
027	OTHER ZOONOTIC BACTERIAL DISEASES	1	1	0	1	1	0	0	0	0
030-041	OTHER BACTERIAL DISEASES	640	249	391	596	224	372	44	25	19
031	DISEASES DUE TO OTHER MYCOBACTERIA	6	4	2	5	3	2	1	1	0
036	MENINGOCOCCAL INFECTION	3	1	2	3	1	2	0	0	0
038	SEPTICAEMIA	616	236	380	574	213	361	42	23	19
040	OTHER BACTERIAL DISEASES	1	0	1	1	0	1	0	0	0
041	BACTERIAL INFECTION IN CONDITIONS CLASSIFIED ELSEWHERE AND OF UNSPECIFIED SITE	14	8	6	13	7	6	1	1	0
042-044	AIDS, ARC AND ARV	241	209	32	190	176	14	51	33	18
042	AIDS	233	203	30	184	171	13	49	32	17
043	ARC	3	1	2	2	1	1	1	0	1
044	ARV	5	5	0	4	4	0	1	1	0
045-049	POLIO MYELITIS AND OTHER ENTEROVIRUS	10	5	5	10	5	5	0	0	0
046	DIS. OF CENTRAL NERVOUS SYSTEM	6	2	4	6	2	4	0	0	0
049	SLOW VIRUS INFECTION OF CENTRAL NERVOUS SYSTEM	4	3	1	4	3	1	0	0	0
050-057	OTHER VIRAL DISEASES OF CENTRAL NERVOUS SYSTEM	9	4	5	9	4	5	0	0	0
052	VIRAL DISEASES ACCOMPANIED BY EXANTHEM	3	1	2	3	1	2	0	0	0
052	CHICKENPOX	3	1	2	3	1	2	0	0	0
053	HERPES ZOSTER	3	1	2	3	1	2	0	0	0
054	HERPES SIMPLEX	1	0	1	1	0	1	0	0	0
055	MEASLES	2	2	0	2	2	0	0	0	0
070-079	OTHER VIRAL DISEASES	39	19	20	34	16	18	5	3	2
070	VIRAL HEPATITIS	26	17	9	21	14	7	5	3	2
075	INFECTIOUS MONONUCLEOSIS	2	1	1	2	1	1	0	0	0
078	OTHER DISEASES DUE TO VIRUSES AND CHLAMYDIAE	2	0	2	2	0	2	0	0	0
079	VIRAL INFECTION IN CONDITIONS CLASSIFIED ELSEWHERE AND OF UNSPECIFIED SITE	9	1	8	9	1	8	0	0	0
090-099	SYPHILIS AND OTHER VENEREAL DISEASES	2	0	2	2	0	2	0	0	0
090	CONGENITAL SYPHILIS	1	0	1	1	0	1	0	0	0
098	GONOCOCCAL INFECTIONS	1	0	1	1	0	1	0	0	0
110-118	MYCOSES	45	15	30	42	14	28	3	1	2
112	CANDIDIASIS	23	5	18	22	5	17	1	0	1
115	HISTOPLASMOSIS	1	0	1	1	0	1	0	0	0
117	OTHER MYCOSES	21	10	11	19	9	10	2	1	1
130-136	OTHER INFECTIVE AND PARASITIC DISEASES	39	21	18	34	18	16	5	3	2
130	TOXOPLASMOSIS	2	1	1	2	1	1	0	0	0
135	SARCROIDOSIS	7	3	4	4	1	3	3	2	1
136	OTHER AND UNSPECIFIED INFECTIOUS AND PARASITIC DISEASES	30	17	13	28	16	12	2	1	1

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ICD. LIST NUMBER	CAUSE OF DEATH I. INFECTIVE AND PARASITIC DISEASES (CONTINUED)	***** T O T A L S *****										***** W H I T E *****										***** N O N - W H I T E *****									
		T O T A L S					W H I T E					N O N - W H I T E					T O T A L S					W H I T E					N O N - W H I T E				
		TOT	MALE	FEM			TOT	MALE	FEM			TOT	MALE	FEM			TOT	MALE	FEM			TOT	MALE	FEM			TOT	MALE	FEM		
137-139	LATE EFFECTS OF INFECTIOUS AND PARASITIC DISEASES	5	2	3			5	2	3			5	2	3			5	2	3			5	2	3			5	2	3		
137	TUBERCULOSIS	1	0	1			1	0	1			1	0	1			1	0	1			1	0	1			1	0	1		
138	ACUTE POLIOMYELITIS	4	2	2			4	2	2			4	2	2			4	2	2			4	2	2			4	2	2		
*140-149	II. NEOPLASMS	13497	6802	6695			13053	6553	6500			444	249	195			13053	6553	6500			444	249	195			13053	6553	6500		
140-149	MALIGNANT NEOPLASM OF LIP, ORAL CAVITY AND PHARYNX	261	162	99			246	150	96			15	12	3			246	150	96			15	12	3			246	150	96		
140	LIP	4	4	0			4	4	0			0	0	0			4	4	0			0	0	0			4	4	0		
141	TONGUE	74	49	25			70	45	25			4	4	0			70	45	25			4	4	0			70	45	25		
142	MAJOR SALIVARY GLANDS	17	11	6			17	11	6			0	0	0			17	11	6			0	0	0			17	11	6		
143	GUM	2	1	1			2	1	1			0	0	0			2	1	1			0	0	0			2	1	1		
144	FLOOR OF MOUTH	11	4	7			11	4	7			0	0	0			11	4	7			0	0	0			11	4	7		
145	OTHER AND UNSPECIFIED PARTS OF MOUTH	40	24	16			36	22	14			4	2	2			36	22	14			4	2	2			36	22	14		
146	OROPHARYNX	24	11	13			23	10	13			1	1	0			23	10	13			1	1	0			23	10	13		
147	NASOPHARYNX	21	13	8			20	12	8			1	1	0			20	12	8			1	1	0			20	12	8		
148	HYPOPHARYNX	16	12	4			13	10	3			3	2	1			13	10	3			3	2	1			13	10	3		
149	OTHER AND ILL-DEFINED SITES WITHIN THE LIP, ORAL CAVITY AND PHARYNX	52	33	19			50	31	19			2	2	0			50	31	19			2	2	0			50	31	19		
150-159	MALIGNANT NEOPLASM OF DIGESTIVE ORGANS AND PERITONEUM	3529	1784	1745			3404	1703	1701			125	81	44			3404	1703	1701			125	81	44			3404	1703	1701		
150	ESOPHAGUS	294	207	87			274	189	85			20	18	2			274	189	85			20	18	2			274	189	85		
151	STOMACH	437	250	187			416	237	179			21	13	8			416	237	179			21	13	8			416	237	179		
152	SMALL INTESTINE, INCLUDING DUODENUM	24	11	13			24	11	13			0	0	0			24	11	13			0	0	0			24	11	13		
153	COLON	1450	686	764			1417	670	747			33	16	17			1417	670	747			33	16	17			1417	670	747		
154	RECTUM, RECTOSIGMOID JUNCTION AND ANUS	323	161	162			318	157	161			5	4	1			318	157	161			5	4	1			318	157	161		
155	LIVER AND INTRAHEPATIC BILE DUCTS	169	100	69			157	90	67			12	10	2			157	90	67			12	10	2			157	90	67		
156	GALLBLADDER AND EXTRAHEPATIC BILE DUCTS	107	45	62			106	44	62			1	1	0			106	44	62			1	1	0			106	44	62		
157	PANCREAS	633	280	353			603	262	341			30	18	12			603	262	341			30	18	12			603	262	341		
158	RETROPERITONEUM AND PERITONEUM	15	4	11			14	4	10			1	0	1			14	4	10			1	0	1			14	4	10		
159	OTHER AND ILL-DEFINED SITES WITHIN THE DIGESTIVE ORGANS AND PERITONEUM	77	40	37			75	39	36			2	1	1			75	39	36			2	1	1			75	39	36		
160-165	MALIGNANT NEOPLASM OF RESPIRATORY AND INTRATHORACIC ORGANS	3383	2170	1213			3273	2094	1179			110	76	34			3273	2094	1179			110	76	34			3273	2094	1179		
160	NASAL CAVITIES, MIDDLE EAR AND ACCESSORY SINUSES	9	4	5			9	4	5			0	0	0			9	4	5			0	0	0			9	4	5		
161	LARYNX	121	98	23			116	94	22			5	4	1			116	94	22			5	4	1			116	94	22		
162	TRACHEA, BRONCHUS AND LUNG	3237	2058	1179			3133	1987	1146			104	71	33			3133	1987	1146			104	71	33			3133	1987	1146		
163	PLEURA	5	4	1			4	3	1			1	1	0			4	3	1			1	1	0			4	3	1		
164	THYROID, HEART AND MEDIASTINUM	9	5	4			9	5	4			0	0	0			9	5	4			0	0	0			9	5	4		
165	OTHER AND ILL-DEFINED SITES WITHIN THE RESPIRATORY SYSTEM AND INTRATHORACIC ORGANS	2	1	1			2	1	1			0	0	0			2	1	1			0	0	0			2	1	1		
170-175	MALIGNANT NEOPLASM OF BONE, CONNECTIVE TISSUE, SKIN, AND BREAST	1635	202	1433			1583	196	1387			52	6	46			1583	196	1387			52	6	46			1583	196	1387		
170	BONE AND ARTICULAR CARTILAGE	13	4	9			13	4	9			0	0	0			13	4	9			0	0	0			13	4	9		
171	CONNECTIVE AND OTHER SOFT TISSUE	74	36	38			70	34	36			4	2	2			70	34	36			4	2	2			70	34	36		
172	MALIGNANT MELANOMA OF SKIN	173	109	64			173	109	64			0	0	0			173	109	64			0	0	0			173	109	64		
173	OTHER MALIGNANT NEOPLASM OF SKIN	65	46	19			61	42	19			4	4	0			61	42	19			4	4	0			61	42	19		



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ICD. LIST NUMBER	CAUSE OF DEATH II. NEOPLASMS (CONTINUED)	***** TOTALS *****						***** WHITE *****						***** NON-WHITE *****					
		TOTALS		WHITE		NON-WHITE		TOTALS		WHITE		NON-WHITE		TOTALS		WHITE		NON-WHITE	
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
174	FEMALE BREAST	1302	0	1302				1258	0	1258				44	0	44			
175	MALE BREAST	8	7	1				8	7	1				0	0	0			
179-189	MALIGNANT NEOPLASM OF GENITOURINARY ORGANS	1932	1064	868				1877	1031	846				55	33	22			
179	UTERUS, PART UNSPECIFIED	71	0	71				70	0	70				1	0	1			
180	CERVIX UTERI	91	0	91				82	0	82				9	0	9			
182	BODY OF UTERUS	97	0	97				95	0	95				2	0	2			
183	OVARY AND OTHER UTERINE ADNEXA	346	0	346				339	0	339				7	0	7			
184	OTHER AND UNSPECIFIED FEMALE GENITAL ORGANS	36	0	36				36	0	36				0	0	0			
185	PROSTATE	695	695	0				671	671	0				24	24	0			
186	TESTIS	10	10	0				10	10	0				0	0	0			
187	PENIS AND OTHER MALE GENITAL ORGANS	9	9	0				9	9	0				0	0	0			
188	BLADDER	284	178	106				278	173	105				6	5	1			
189	KIDNEY AND OTHER AND UNSPECIFIED URINARY ORGANS	293	172	121				287	168	119				6	4	2			
190-199	MALIGNANT NEOPLASM OF OTHER AND UNSPECIFIED SITES	1416	750	666				1371	729	642				45	21	24			
190	EYE	4	0	4				4	0	4				0	0	0			
191	BRAIN	270	153	117				266	152	114				4	1	3			
192	OTHER AND UNSPECIFIED PARTS OF NERVOUS SYSTEM	6	4	2				6	4	2				0	0	0			
193	THYROID GLAND	15	7	8				15	7	8				0	0	0			
194	OTHER ENDOCRINE GLANDS AND RELATED STRUCTURES	12	8	4				12	8	4				0	0	0			
195	OTHER AND ILL-DEFINED SITES	85	43	42				80	40	40				5	3	2			
199	WITHOUT SPECIFICATION OF SITE	1024	535	489				988	518	470				36	17	19			
200-208	NEOPLASMS OF LYMPHATIC AND HEMATOPOIETIC TISSUE	1109	554	555				1073	536	537				36	18	18			
200	LYMPHOSARCOMA AND RETICULOSARCOMA	80	36	44				79	36	43				1	0	1			
201	HODGKIN'S DISEASE	52	30	22				50	28	22				2	2	0			
202	OTHER MALIGNANT NEOPLASM OF LYMPHOID AND HISTIOCYTIC TISSUE	361	170	191				349	167	182				12	3	9			
203	MULTIPLE MYELOMA AND IMMUNOPROLIFERATIVE NEOPLASMS	187	93	94				177	87	90				10	6	4			
204	LYMPHOID LEUKAEMIA	111	68	43				109	66	43				2	2	0			
205	MYELOID LEUKAEMIA	196	98	98				194	97	97				2	1	1			
206	MONOCYTIC LEUKAEMIA	6	3	3				5	3	2				1	0	1			
207	OTHER SPECIFIED LEUKAEMIA	9	8	1				9	8	1				0	0	0			
208	LEUKAEMIA OF UNSPECIFIED CELL TYPE	107	48	59				101	44	57				6	4	2			
210-229	BENIGN NEOPLASMS	37	13	24				36	12	24				1	1	0			
211	OTHER PARTS OF DIGESTIVE SYSTEM	2	0	2				2	0	2				0	0	0			
212	RESPIRATORY AND INTRATHORACIC ORGANS	4	1	3				4	1	3				0	0	0			
213	BONE AND ARTICULAR CARTILAGE	1	1	0				1	1	0				0	0	0			
215	OTHER BENIGN NEOPLASM OF CONNECTIVE AND OTHER SOFT TISSUE	1	0	1				1	0	1				0	0	0			
216	SKIN	1	1	0				1	1	0				0	0	0			
225	BRAIN AND OTHER PARTS OF NERVOUS SYSTEM	24	9	15				23	8	15				1	1	0			
227	OTHER ENDOCRINE GLANDS AND RELATED STRUCTURES	3	1	2				3	1	2				0	0	0			
228	HAEMANGIOMA AND LYMPHANGIOMA, ANY SITE	1	0	1				1	0	1				0	0	0			
235-238	NEOPLASMS OF UNCERTAIN BEHAVIOUR	45	24	21				44	24	20				1	0	1			
235	DIGESTIVE AND RESPIRATORY SYSTEMS	3	2	1				3	2	1				0	0	0			
237	ENDOCRINE GLANDS AND NERVOUS SYSTEM	5	4	1				5	4	1				0	0	0			



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ICD. LIST NUMBER	CAUSE OF DEATH II. NEOPLASMS (CONTINUED)	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
238	OTHER AND UNSPECIFIED SITES AND TISSUES	37	18	19	36	18	18	1	0	1
239-239	NEOPLASM OF UNSPECIFIED NATURE	150	79	71	146	78	68	4	1	3
239	NEOPLASM OF UNSPECIFIED NATURE	150	79	71	146	78	68	4	1	3
*240	279 III. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES	1249	539	710	1189	514	675	60	25	35
240-246	DISORDERS OF THYROID GLAND	24	4	20	23	4	19	1	0	1
240	SIMPLE AND UNSPECIFIED GOITRE	1	0	1	1	0	1	0	0	0
242	THYROTOXICOSIS WITH OR WITHOUT GOITRE	1	0	1	1	0	1	0	0	0
244	ACQUIRED HYPOTHYROIDISM	22	4	18	21	4	17	1	0	1
250-259	DISEASES OF OTHER ENDOCRINE GLANDS	863	368	495	825	357	468	38	11	27
250	DIABETES MELLITUS	848	363	485	812	353	459	36	10	26
251	OTHER DISORDERS OF PANCREATIC INTERNAL SECRETION	3	2	1	2	1	1	1	1	0
252	DISORDERS OF PARATHYROID GLAND	4	2	2	4	2	2	0	0	0
253	DISORDERS OF THE PITUITARY GLAND AND ITS HYPOTHALAMIC CONTROL	1	0	1	1	0	1	0	0	0
255	DISORDERS OF ADRENAL GLANDS	6	1	5	6	1	5	0	0	0
259	OTHER ENDOCRINE DISORDERS	1	0	1	0	0	0	1	0	1
260-269	NUTRITIONAL DEFICIENCIES	80	29	51	74	26	48	6	3	3
260	KWASHIORKOR	2	0	2	2	0	2	0	0	0
261	NUTRITIONAL MARASMUS	6	4	2	4	2	2	2	2	0
263	OTHER AND UNSPECIFIED PROTEIN-CALORIE MALNUTRITION	63	21	42	59	20	39	4	1	3
265	THIAMINE AND NIACIN DEFICIENCY STATES	4	3	1	4	3	1	0	0	0
266	DEFICIENCY OF B-COMPLEX COMPONENTS	1	0	1	1	0	1	0	0	0
267	ASCORBIC ACID DEFICIENCY	1	1	0	1	1	0	0	0	0
269	OTHER NUTRITIONAL DEFICIENCIES	3	0	3	3	0	3	0	0	0
270-279	OTHER METABOLIC AND IMMUNITY DISORDERS	282	138	144	267	127	140	15	11	4
270	DISORDERS OF AMINO-ACID TRANSPORT AND METABOLISM	1	0	1	1	0	1	0	0	0
271	DISORDERS OF CARBOHYDRATE TRANSPORT AND METABOLISM	2	1	1	2	1	1	0	0	0
272	DISORDERS OF LIPOID METABOLISM	15	5	10	15	5	10	0	0	0
273	DISORDERS OF PLASMA PROTEIN METABOLISM	16	9	7	16	9	7	0	0	0
275	DISORDERS OF MINERAL METABOLISM	18	14	4	15	12	3	3	2	1
276	DISORDERS OF FLUID, ELECTROLYTE AND ACID-BASE BALANCE	147	56	91	138	50	88	9	6	3
277	OTHER AND UNSPECIFIED DISORDERS OF METABOLISM	47	25	22	47	25	22	0	0	0
278	OBESITY AND OTHER HYPERALIMENTATION	22	16	6	22	16	6	0	0	0
279	DISORDERS INVOLVING THE IMMUNE MECHANISM	14	12	2	11	9	2	3	3	0

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ICD-10 LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*280	IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS	219	108	111	209	102	107	10	6	4
280	IRON DEFICIENCY ANAEMIAS	2	1	1	2	1	1	0	0	0
281	OTHER DEFICIENCY ANAEMIAS	6	1	5	6	1	5	0	0	0
282	HEREDITARY HAEMOLYTIC ANAEMIAS	13	9	4	8	5	3	5	4	1
283	ACQUIRED HAEMOLYTIC ANAEMIAS	4	2	2	4	2	2	0	0	0
284	APLASTIC ANAEMIA	36	22	14	35	21	14	1	1	0
285	OTHER AND UNSPECIFIED ANAEMIAS	43	17	26	43	17	26	0	0	0
286	COAGULATION DEFECTS	40	21	19	37	20	17	3	1	2
287	PURPURA AND OTHER HAEMORRHAGIC CONDITIONS	11	5	6	10	5	5	1	0	1
288	DISEASES OF WHITE BLOOD CELLS	17	6	11	17	6	11	0	0	0
289	OTHER DISEASES OF BLOOD AND BLOOD-FORMING ORGANS	47	24	23	47	24	23	0	0	0
*290	V. MENTAL DISORDERS	528	208	320	504	195	309	24	13	11
290-294	ORGANIC PSYCHOTIC CONDITIONS	170	45	125	169	45	124	1	0	1
290	SENILE AND PRESENILE ORGANIC PSYCHOTIC CONDITIONS	159	37	122	158	37	121	1	0	1
291	ALCOHOLIC PSYCHOSES	10	7	3	10	7	3	0	0	0
294	OTHER ORGANIC PSYCHOTIC CONDITIONS (CHRONIC)	1	1	0	1	1	0	0	0	0
295-299	OTHER PSYCHOSES	139	43	96	133	42	91	6	1	5
295	SCHIZOPHRENIC PSYCHOSES	12	4	8	12	4	8	0	0	0
296	AFFECTIVE PSYCHOSES	3	2	1	3	2	1	0	0	0
298	OTHER NONORGANIC PSYCHOSES	124	37	87	118	36	82	6	1	5
300-316	NEUROSES, PERSONALITY DISORDERS, AND OTHER NONPSYCHOTIC DISORDERS	209	113	96	192	101	91	17	12	5
300	NEUROTIC DISORDERS	3	0	3	2	0	2	1	0	1
303	ALCOHOL DEPENDENCE SYNDROME	81	62	19	69	54	15	12	8	4
304	DRUG DEPENDENCE	7	7	0	5	5	0	2	2	0
305	NONDEPENDENT ABUSE OF DRUGS	26	18	8	24	16	8	2	2	0
306	PHYSIOLOGICAL MALFUNCTION ARISING FROM MENTAL FACTORS	3	1	2	3	1	2	0	0	0
307	SPECIAL SYMPTOMS OR SYNDROMES NOT ELSEWHERE CLASSIFIED	5	2	3	5	2	3	0	0	0
308	ACUTE REACTION TO STRESS	1	0	1	1	0	1	0	0	0
310	SPECIFIC NONPSYCHOTIC MENTAL DISORDERS FOLLOWING ORGANIC BRAIN DAMAGE	68	19	49	68	19	49	0	0	0
311	DEPRESSIVE DISORDER, NOT ELSEWHERE CLASSIFIED	14	4	10	14	4	10	0	0	0
312	DISTURBANCE OF CONDUCT NOT ELSEWHERE CLASSIFIED	1	0	1	1	0	1	0	0	0
317-319	MENTAL RETARDATION	10	7	3	10	7	3	0	0	0
319	UNSPECIFIED MENTAL RETARDATION	10	7	3	10	7	3	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	TOTALS			WHITE			NON-WHITE		
		TOT 1102	MALE 470	FEM 632	TOT 1065	MALE 450	FEM 615	TOT 37	MALE 20	FEM 17
*320-326	INFLAMMATORY DISEASES OF THE CENTRAL NERVOUS SYSTEM	32	18	14	30	17	13	2	1	1
320	BACTERIAL MENINGITIS	10	5	5	9	4	5	1	1	0
322	MENINGITIS OF UNSPECIFIED CAUSE	9	6	3	8	6	2	1	0	1
323	ENCEPHALITIS, MYELITIS AND ENCEPHALOMYELITIS	6	3	3	6	3	3	0	0	0
324	INTRACRANIAL AND INTRASPINAL ABSCESS	6	3	3	6	3	3	0	0	0
325	PHLEBITIS AND THROMBOPHLEBITIS OF INTRACRANIAL VENOUS SINUSES	1	1	0	1	1	0	0	0	0
330-337	HEREDITARY AND DEGENERATIVE DISEASES OF NERVOUS SYSTEM	763	291	472	747	284	463	16	7	9
330	CEREBRAL DEGENERATIONS USUALLY MANIFEST IN CHILDHOOD	2	0	2	2	0	2	0	0	0
331	OTHER CEREBRAL DEGENERATIONS	467	154	313	461	152	309	6	2	4
332	PARKINSON'S DISEASE	173	96	77	166	92	74	7	4	3
333	OTHER EXTRAPYRAMIDAL DISEASE AND ABNORMAL MOVEMENT DISORDERS	19	9	10	19	9	10	0	0	0
334	SPINOCEREBELLAR DISEASE	8	3	5	8	3	5	0	0	0
335	ANTERIOR HORN CELL DISEASE	90	28	62	87	27	60	3	1	2
336	OTHER DISEASES OF SPINAL CORD	4	1	3	4	1	3	0	0	0
340-349	OTHER DISORDERS OF THE CENTRAL NERVOUS SYSTEM	252	129	123	233	117	116	19	12	7
340	MULTIPLE SCLEROSIS	63	25	38	59	23	36	4	2	2
341	OTHER DEMYELINATING DISEASES OF CENTRAL NERVOUS SYSTEM	7	4	3	7	4	3	0	0	0
342	HEMIPLEGIA	10	4	6	10	4	6	0	0	0
343	INFANTILE CEREBRAL PALSY	9	7	2	8	6	2	1	1	0
344	OTHER PARALYTIC SYNDROMES	18	10	8	18	10	8	0	0	0
345	EPILEPSY	32	22	10	28	19	9	4	3	1
348	OTHER CONDITIONS OF BRAIN	111	55	56	101	49	52	10	6	4
349	OTHER AND UNSPECIFIED DISORDERS OF THE NERVOUS SYSTEM	2	2	0	2	2	0	0	0	0
350-359	DISORDERS OF PERIPHERAL NERVOUS SYSTEM	52	30	22	52	30	22	0	0	0
352	DISORDERS OF OTHER CRANIAL NERVES	1	1	0	1	1	0	0	0	0
355	MONONEURITIS OF LOWER LIMB	1	0	1	1	0	1	0	0	0
356	HEREDITARY AND IDIOPATHIC PERIPHERAL NEUROPATHY	7	1	6	7	1	6	0	0	0
357	INFLAMMATORY AND TOXIC NEUROPATHY	5	4	1	5	4	1	0	0	0
358	MYONEURAL DISORDERS	16	8	8	16	8	8	0	0	0
359	MUSCULAR DYSTROPHIES AND OTHER MYOPATHIES	22	16	6	22	16	6	0	0	0
360-379	DISORDERS OF EYE AND ADNEXA	1	1	0	1	1	0	0	0	0
378	STRABISMUS AND OTHER DISORDERS OF BINOCULAR EYE MOVEMENTS	1	1	0	1	1	0	0	0	0
380-389	DISEASES OF THE EAR AND MASTOID PROCESS	2	1	1	2	1	1	0	0	0
382	SUPPURATIVE AND UNSPECIFIED OTITIS MEDIA	2	1	1	2	1	1	0	0	0

ICD LIST NUMBER	CAUSE OF DEATH	T O T A L S			W H I T E			N O N - W H I T E		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
*390-459	VII. DISEASES OF THE CIRCULATORY SYSTEM	25571	11761	13810	24848	11378	13470	722	382	340
390-392	ACUTE RHEUMATIC FEVER	2	2	0	2	2	0	0	0	0
391	RHEUMATIC FEVER WITH HEART INVOLVEMENT	2	2	0	2	2	0	0	0	0
393-398	CHRONIC RHEUMATIC HEART DISEASE	188	51	137	184	50	134	4	1	3
393	CHRONIC RHEUMATIC PERICARDITIS	1	0	1	1	0	1	0	0	0
394	DISEASES OF MITRAL VALVE	75	14	61	73	13	60	2	1	1
395	DISEASES OF AORTIC VALVE	7	5	2	7	5	2	0	0	0
396	DISEASES OF MITRAL AND AORTIC VALVES	26	13	13	26	13	13	0	0	0
397	DISEASES OF OTHER ENDOCARDIAL STRUCTURES	17	5	12	17	5	12	0	0	0
398	OTHER RHEUMATIC HEART DISEASE	62	14	48	60	14	46	2	0	2
401-405	HYPERTENSIVE DISEASE	630	263	367	576	231	345	54	32	22
401	ESSENTIAL HYPERTENSION	95	33	62	90	31	59	5	2	3
402	HYPERTENSIVE HEART DISEASE	407	183	224	366	158	208	41	25	16
403	HYPERTENSIVE RENAL DISEASE	87	33	54	81	30	51	6	3	3
404	HYPERTENSIVE HEART AND RENAL DISEASE	41	14	27	39	12	27	2	2	0
410-414	ISCHEMIC HEART DISEASE	14140	7057	7083	13855	6888	6967	285	169	116
410	ACUTE MYOCARDIAL INFARCTION	6983	3670	3313	6839	3584	3255	144	86	58
411	OTHER ACUTE AND SUBACUTE FORM OF ISCHAEMIC HEART DISEASE	14	6	8	14	6	8	0	0	0
412	OLD MYOCARDIAL INFARCTION	18	10	8	17	9	8	1	1	0
413	ANGINA PECTORIS	32	13	19	32	13	19	0	0	0
414	OTHER FORMS OF CHRONIC ISCHAEMIC HEART DISEASE	7093	3358	3735	6953	3276	3677	140	82	58
415-417	DISEASES OF PULMONARY CIRCULATION	274	115	159	261	106	155	13	9	4
415	ACUTE PULMONARY HEART DISEASE	219	97	122	209	91	118	10	6	4
416	CHRONIC PULMONARY HEART DISEASE	54	18	36	51	15	36	3	3	0
417	OTHER DISEASES OF PULMONARY CIRCULATION	1	0	1	1	0	1	0	0	0
420-429	OTHER FORMS OF HEART DISEASE	5054	2337	2717	4853	2234	2619	200	102	98
420	ACUTE PERICARDITIS	2	0	2	2	0	2	0	0	0
421	ACUTE AND SUBACUTE ENDOCARDITIS	24	15	9	24	15	9	0	0	0
422	ACUTE MYOCARDITIS	7	6	1	7	6	1	0	0	0
423	OTHER DISEASES OF PERICARDIUM	19	10	9	19	10	9	0	0	0
424	OTHER DISEASES OF ENDOCARDIUM	342	137	205	337	135	202	5	2	3
425	CARDIOMYOPATHY	386	258	128	363	240	123	22	17	5
426	CONDUCTION DISORDERS	41	22	19	40	22	18	1	0	1
427	CARDIAC DYSRHYTHMIAS	1873	888	985	1809	858	951	64	30	34
428	HEART FAILURE	1131	422	709	1104	416	688	27	6	21
429	ILL-DEFINED DESCRIPTIONS AND COMPLICATIONS OF HEART DISEASE	1229	579	650	1148	532	616	81	47	34
430-438	CEREBROVASCULAR DISEASE	3777	1269	2508	3649	1216	2433	128	53	75
430	SUBARACHNOID HAEMORRHAGE	172	50	122	159	47	112	13	3	10
431	INTRACEREBRAL HAEMORRHAGE	472	187	285	457	180	277	15	7	8
432	OTHER AND UNSPECIFIED INTRACRANIAL HAEMORRHAGE	73	29	44	71	28	43	2	1	1
433	OCCCLUSION AND STENOSIS OF CEREBRAL ARTERIES	29	12	17	28	12	16	1	0	1
434	OCCCLUSION OF CEREBRAL ARTERIES	669	212	457	652	206	446	17	6	11
435	TRANSIENT CEREBRAL ISCHAEMIA	14	3	11	14	3	11	0	0	0
436	ACUTE BUT ILL-DEFINED CEREBROVASCULAR DISEASE	1811	594	1217	1748	567	1181	63	27	36
437	OTHER AND ILL-DEFINED CEREBROVASCULAR DISEASE	302	91	211	297	89	208	5	2	3
438	LATE EFFECTS OF CEREBROVASCULAR DISEASE	235	91	144	223	84	139	12	7	5
440-448	DISEASES OF ARTERIES, ARTERIOLES, AND CAPILLARIES	1361	608	753	1336	597	739	25	11	14
440	ATHEROSCLEROSIS	727	258	469	715	251	464	12	7	5



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ICD. LIST NUMBER		CAUSE OF DEATH VII. DISEASES OF THE CIRCULATORY SYSTEM (CONTINUED)		TOTALS		WHITE		NON-WHITE	
				TOT	MALE	FEM	TOT	MALE	FEM
				TOT	MALE	FEM	TOT	MALE	FEM
441		AORTIC ANEURYSM		384	231	153	377	229	148
442		OTHER ANEURYSM		15	12	3	14	11	3
443		OTHER PERIPHERAL VASCULAR DISEASE		121	58	63	117	57	60
444		ARTERIAL EMBOLISM AND THROMBOSIS		56	21	35	55	21	34
446		POLYARTERITIS NODOSA AND ALLIED CONDITIONS		25	11	14	25	11	14
447		OTHER DISORDERS OF ARTERIES AND ARTERIOLES		31	16	15	31	16	15
448		DISEASES OF CAPILLARIES		2	1	1	2	1	1
451-459		DISEASES OF VEINS AND LYMPHATICS, AND OTHER DIS. OF CIRCULATORY SYS.		145	59	86	132	54	78
451		PHLEBITIS AND THROMBOPHLEBITIS		26	12	14	25	12	13
452		PORTAL VEIN THROMBOSIS		2	2	0	2	2	0
453		OTHER VENOUS EMBOLISM AND THROMBOSIS		10	2	8	10	2	8
454		VARICOSE VEINS OF LOWER EXTREMITIES		4	3	1	3	2	1
456		VARICOSE VEINS OF OTHER SITES		12	9	3	12	9	3
457		NONINFECTIVE DISORDERS OF LYMPHATIC CHANNELS		2	0	2	2	0	2
458		HYPOTENSION		65	20	45	57	18	39
459		OTHER DISORDERS OF CIRCULATORY SYSTEM		24	11	13	21	9	12
*460-519		VIII. DISEASES OF THE RESPIRATORY SYSTEM		5112	2545	2567	4991	2475	2516
460-466		ACUTE RESPIRATORY INFECTIONS		18	9	9	15	7	8
464		ACUTE LARYNGITIS AND TRACHEITIS		2	2	0	2	2	0
465		ACUTE UPPER RESPIRATORY INFECTIONS OF MULTIPLE OR UNSPECIFIED SITES		6	3	3	6	3	3
466		ACUTE BRONCHITIS AND BRONCHIOLITIS		10	4	6	7	2	5
470-478		OTHER DISEASES UPPER RESPIRATORY TRACT		10	2	8	9	2	7
473		CHRONIC SINUSITIS		2	0	2	1	0	1
478		OTHER DISEASES OF UPPER RESPIRATORY TRACT		8	2	6	8	2	6
480-487		PNEUMONIA AND INFLUENZA		2454	1090	1364	2406	1063	1343
480		VIRAL PNEUMONIA		8	3	5	8	3	5
481		PNEUMOCOCCAL PNEUMONIA		86	51	35	81	48	33
482		OTHER BACTERIAL PNEUMONIA		78	45	33	77	45	32
483		PNEUMONIA DUE TO OTHER SPECIFIED ORGANISM		1	1	0	1	1	0
485		BRONCHOPNEUMONIA, ORGANISM UNSPECIFIED		229	102	127	221	95	126
486		PNEUMONIA, ORGANISM UNSPECIFIED		2044	885	1159	2010	868	1142
487		INFLUENZA		8	3	5	8	3	5
490-496		CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ALLIED CONDITIONS		1890	1063	827	1853	1042	811
490		BRONCHITIS, NOT SPECIFIED AS ACUTE OR CHRONIC		28	12	16	27	12	15
491		CHRONIC BRONCHITIS		80	39	41	79	39	40
492		EMPHYSEMA		315	190	125	313	188	125
493		ASTHMA		120	39	81	109	32	77
494		BRONCHIECTASIS		20	9	11	19	8	11
496		CHRONIC AIRWAYS OBSTRUCTION, NOT ELSEWHERE CLASSIFIED		1327	774	553	1306	763	543
500-508		PNEUMOCONIOSES AND OTHER LUNG DISEASES DUE TO EXTERNAL AGENTS		291	140	151	279	133	146
501		ASBESTOSIS		9	8	1	9	8	1
502		PNEUMOCONIOSIS DUE TO OTHER SILICA OR SILICATES		2	2	0	2	2	0

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ICD. LIST NUMBER	CAUSE OF DEATH VIII. DISEASES OF THE RESPIRATORY SYSTEM (CONTINUED)	***** TOTALS *****						***** WHITE *****						***** NON-WHITE *****					
		TOT		MALE		FEM		TOT		MALE		FEM		TOT		MALE		FEM	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
505	PNEUMONIOSIS, UNSPECIFIED	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0
507	PNEUMONITIS DUE TO SOLIDS AND LIQUIDS	278	129	149	1	1	1	266	122	144	1	1	1	12	7	5	0	0	0
508	RESPIRATORY CONDITIONS DUE TO OTHER AND UNSPECIFIED EXTERNAL AGENTS	1	0	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0
510-519	OTHER DISEASES OF RESPIRATORY SYSTEM	449	241	208	449	241	208	429	228	201	429	228	201	20	13	7	20	13	7
510	EMPHYSEMA	13	8	5	13	8	5	13	8	5	13	8	5	0	0	0	0	0	0
511	PLEURISY	22	13	9	22	13	9	22	13	9	22	13	9	0	0	0	0	0	0
512	PNEUMOTHORAX	14	9	5	14	9	5	14	13	8	13	8	5	1	1	0	1	1	0
513	ABSCESS OF LUNG AND MEDIASTINUM	19	11	8	19	11	8	18	10	8	18	10	8	1	1	0	1	1	0
514	PULMONARY CONGESTION AND HYPOSTASIS	35	19	16	35	19	16	33	18	15	33	18	15	2	1	1	2	1	1
515	POSTINFLAMMATORY PULMONARY FIBROSIS	117	64	53	117	64	53	112	61	51	112	61	51	5	3	2	5	3	2
516	OTHER ALVEOLAR AND PARIETOALVEOLAR PNEUMOPATHY	19	14	5	19	14	5	17	13	4	17	13	4	2	1	1	2	1	1
518	OTHER DISEASES OF LUNG	183	95	88	183	95	88	175	90	85	175	90	85	8	5	3	8	5	3
519	OTHER DISEASES OF RESPIRATORY SYSTEM	27	8	19	27	8	19	26	7	19	26	7	19	1	1	0	1	1	0
*520-529	DISEASES OF THE DIGESTIVE SYSTEM	2275	1157	1118	2275	1157	1118	2177	1098	1079	2177	1098	1079	98	59	39	98	59	39
520-529	DISEASES OF ORAL CAVITY, SALIVARY GLANDS AND JAWS	2	1	1	2	1	1	2	1	1	2	1	1	0	0	0	0	0	0
527	DISEASES OF THE SALIVARY GLANDS	2	1	1	2	1	1	2	1	1	2	1	1	0	0	0	0	0	0
530-537	DISEASES OF ESOPHAGUS, STOMACH, AND DUODENUM	243	105	138	243	105	138	237	101	136	237	101	136	6	4	2	6	4	2
530	DISEASES OF ESOPHAGUS	47	21	26	47	21	26	47	21	26	47	21	26	0	0	0	0	0	0
531	GASTRIC ULCER	54	19	35	54	19	35	51	17	34	51	17	34	3	2	1	3	2	1
532	DUODENAL ULCER	65	31	34	65	31	34	65	31	34	65	31	34	0	0	0	0	0	0
533	PEPTIC ULCER, SITE UNSPECIFIED	41	17	24	41	17	24	38	15	23	38	15	23	3	2	1	3	2	1
534	GASTROJEJUNAL ULCER	4	2	2	4	2	2	4	2	2	4	2	2	0	0	0	0	0	0
535	GASTRITIS AND DUODENITIS	18	9	9	18	9	9	18	9	9	18	9	9	0	0	0	0	0	0
536	DISORDERS OF FUNCTION OF STOMACH	3	2	1	3	2	1	3	2	1	3	2	1	0	0	0	0	0	0
537	OTHER DISORDERS OF STOMACH AND DUODENUM	11	4	7	11	4	7	11	4	7	11	4	7	0	0	0	0	0	0
540-543	APPENDICITIS	13	3	10	13	3	10	13	3	10	13	3	10	0	0	0	0	0	0
540	ACUTE APPENDICITIS	13	3	10	13	3	10	13	3	10	13	3	10	0	0	0	0	0	0
550-553	HERNIA OF ABDOMINAL CAVITY	40	10	30	40	10	30	40	10	30	40	10	30	0	0	0	0	0	0
550	INGUINAL HERNIA	7	5	2	7	5	2	7	5	2	7	5	2	0	0	0	0	0	0
551	OTHER HERNIA OF ABDOMINAL CAVITY, WITH GANGRENE	6	2	4	6	2	4	6	2	4	6	2	4	0	0	0	0	0	0
552	OTHER HERNIA OF ABDOMINAL CAVITY WITH OBSTRUCTION, WITHOUT MENTION OF GANGRENE	18	3	15	18	3	15	18	3	15	18	3	15	0	0	0	0	0	0
553	OTHER HERNIA OF ABDOMINAL CAVITY WITHOUT MENTION OF OBSTRUCTION OR GANGRENE	9	0	9	9	0	9	9	0	9	9	0	9	0	0	0	0	0	0
555-558	NONINFECTIVE ENTERITIS AND COLITIS	245	96	149	245	96	149	239	94	145	239	94	145	6	2	4	6	2	4
555	REGIONAL ENTERITIS	6	2	4	6	2	4	6	2	4	6	2	4	0	0	0	0	0	0
556	IDIOPATHIC PROCTOCOLITIS	16	10	6	16	10	6	16	10	6	16	10	6	0	0	0	0	0	0
557	VASCULAR INSUFFICIENCY OF INTESTINE	198	77	121	198	77	121	193	75	118	193	75	118	5	2	3	5	2	3
558	OTHER NONINFECTIVE GASTROENTERITIS AND COLITIS	25	7	18	25	7	18	24	7	17	24	7	17	1	0	1	1	0	1
560-569	OTHER DISEASES OF INTESTINE AND PERITONEUM	325	115	210	325	115	210	306	106	200	306	106	200	19	9	10	19	9	10
560	INTESTINAL OBSTRUCTION WITHOUT MENTION OF HERNIA	110	38	72	110	38	72	102	35	67	102	35	67	8	3	5	8	3	5
562	DIVERTICULA OF INTESTINE	88	26	62	88	26	62	87	26	61	87	26	61	1	0	1	1	0	1



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ICD. LIST NUMBER	CAUSE OF DEATH IX. DISEASES OF THE DIGESTIVE SYSTEM (CONTINUED)	***** T O T A L S *****						***** W H I T E *****						***** N O N - W H I T E *****					
		T O T		M A L E		F E M		T O T		M A L E		F E M		T O T		M A L E		F E M	
564	FUNCTIONAL DIGESTIVE DISORDERS, NOT ELSEWHERE CLASSIFIED	5	2	3	3	3	5	2	2	3	3	3	3	0	0	0	0	0	0
566	ABCESS OF ANAL AND RECTAL REGIONS	4	3	1	1	1	4	3	3	1	1	1	1	0	0	0	0	0	0
567	PERITONITIS	50	24	26	26	26	44	21	23	23	23	23	23	6	3	3	3	3	3
568	OTHER DISORDERS OF PERITONEUM	3	2	1	1	1	3	2	1	1	1	1	1	0	0	0	0	0	0
569	OTHER DISORDERS OF INTESTINE	65	20	45	45	45	61	17	44	44	44	44	44	4	3	1	1	1	1
570-579	OTHER DISEASES OF DIGESTIVE SYSTEM	1407	827	580	580	580	1340	783	557	557	557	557	557	67	44	23	23	23	23
570	ACUTE AND SUBACUTE NECROSIS OF LIVER	10	5	5	5	5	9	4	5	5	5	5	5	1	1	0	0	0	0
571	CHRONIC LIVER DISEASE AND CIRRHOSIS	773	498	275	275	275	735	474	261	261	261	261	261	38	24	14	14	14	14
572	LIVER ABSCESS AND SEQUELAE OF CHRONIC LIVER DISEASE	155	93	62	62	62	146	88	58	58	58	58	58	9	5	4	4	4	4
573	OTHER DISORDERS OF LIVER	38	31	7	7	7	36	29	7	7	7	7	7	2	2	0	0	0	0
574	CHOLELITHIASIS	32	12	20	20	20	32	12	20	20	20	20	20	0	0	0	0	0	0
575	OTHER DISORDERS OF GALLBLADDER	48	20	28	28	28	46	20	26	26	26	26	26	2	2	0	0	0	0
576	OTHER DISORDERS OF BILIARY TRACT	31	9	22	22	22	31	9	22	22	22	22	22	0	0	0	0	0	0
577	DISEASES OF PANCREAS	65	32	33	33	33	61	29	32	32	32	32	32	4	3	1	1	1	1
578	GASTROINTESTINAL HAEMORRHAGE	252	125	127	127	127	241	116	125	125	125	125	125	11	9	2	2	2	2
579	INTESTINAL MALABSORPTION	3	2	1	1	1	3	2	1	1	1	1	1	0	0	0	0	0	0
*580 629 X.	DISEASES OF THE GENITOURINARY SYSTEM	1054	453	601	601	601	1006	432	574	574	574	574	574	48	21	27	27	27	27
580-589	NEPHRITIS AND NEPHROSIS	612	284	328	328	328	581	272	309	309	309	309	309	31	12	19	19	19	19
580	ACUTE GLOMERULONEPHRITIS	3	2	1	1	1	3	2	1	1	1	1	1	0	0	0	0	0	0
581	NEPHROTIC SYNDROME	2	2	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0
582	CHRONIC GLOMERULONEPHRITIS	24	9	15	15	15	23	9	14	14	14	14	14	1	0	1	1	1	1
583	NEPHRITIS AND NEPHROPATHY, NOT SPECIFIED AS ACUTE OR CHRONIC	8	2	6	6	6	7	2	5	5	5	5	5	1	0	1	1	1	1
584	ACUTE RENAL FAILURE	112	46	66	66	66	108	45	63	63	63	63	63	4	1	3	3	3	3
585	CHRONIC RENAL FAILURE	165	70	95	95	95	153	67	86	86	86	86	86	12	3	9	9	9	9
586	RENAL FAILURE, UNSPECIFIED	297	152	145	145	145	285	145	140	140	140	140	140	12	7	5	5	5	5
587	RENAL SCLEROSIS, UNSPECIFIED	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
590-599	OTHER DISEASES OF URINARY SYSTEM	423	156	267	267	267	406	147	259	259	259	259	259	17	9	8	8	8	8
590	INFECTIONS OF KIDNEY	26	10	16	16	16	25	10	15	15	15	15	15	1	0	1	1	1	1
591	HYDRONEPHROSIS	1	0	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0
592	CALCULUS OF KIDNEY AND URETER	12	5	7	7	7	12	5	7	7	7	7	7	0	0	0	0	0	0
593	OTHER DISORDERS OF KIDNEY AND URETER	54	32	22	22	22	48	29	19	19	19	19	19	6	3	3	3	3	3
595	CYSTITIS	6	1	5	5	5	6	1	5	5	5	5	5	0	0	0	0	0	0
596	OTHER DISORDERS OF BLADDER	8	4	4	4	4	7	3	4	4	4	4	4	1	1	0	0	0	0
597	URETHRITIS, NOT SEXUALLY TRANSMITTED, AND URETHRAL SYNDROME	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
598	URETHRAL STRICTURE	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
599	OTHER DISORDERS OF URETHRA AND URINARY TRACT	314	102	212	212	212	305	97	208	208	208	208	208	9	5	4	4	4	4
600-608	DISEASES OF MALE GENITAL ORGANS	13	13	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0
600	HYPERPLASIA OF PROSTATE	9	9	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0
601	INFLAMMATORY DISEASES OF PROSTATE	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
602	OTHER DISORDERS OF PROSTATE	2	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0
608	OTHER DISORDERS OF MALE GENITAL ORGANS	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
610-611	DISORDERS OF BREAST	2	0	2	2	2	2	0	2	2	2	2	2	0	0	0	0	0	0
611	OTHER DISORDERS OF BREAST	2	0	2	2	2	2	0	2	2	2	2	2	0	0	0	0	0	0
614-616	INFLAMMATORY DISEASE OF FEMALE PELVIC	1	0	1	1	1	1	0	1	1	1	1	1	0	0	0	0	0	0

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ICD. LIST NUMBER	CAUSE OF DEATH	TOTALS			WHITE			NON-WHITE		
		TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM
	XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE (CONTINUED)									
728	DISORDERS OF MUSCLE, LIGAMENT AND FASCIA	3	2	1	3	2	1	0	0	0
729	OTHER DISORDERS OF SOFT TISSUES	5	2	3	4	2	2	1	0	1
730-739	OSTEOPATHIES CHONDROPATHIES & ACQUIRED MUSCULOSKELETAL DEFORMITIES	42	13	29	42	13	29	0	0	0
730	OSTEOMYELITIS, PERIOSTITIS AND OTHER INFECTIONS INVOLVING BONE	19	7	12	19	7	12	0	0	0
731	OSTEITIS DEFORMANS AND OSTEOPATHIES ASSOCIATED WITH OTHER DISORDERS CLASSIFIED ELSEWHERE	3	2	1	3	2	1	0	0	0
733	OTHER DISORDERS OF BONE AND CARTILAGE	8	1	7	8	1	7	0	0	0
737	CURVATURE OF SPINE	11	3	8	11	3	8	0	0	0
738	OTHER ACQUIRED DEFORMITY	1	0	1	1	0	1	0	0	0
*740 759	XIV. CONGENITAL ANOMALIES	217	119	98	201	112	89	16	7	9
740	ANENCEPHALUS AND SIMILAR ANOMALIES	3	1	2	3	1	2	0	0	0
741	SPINA BIFIDA	1	0	1	1	0	1	0	0	0
742	OTHER CONGENITAL ANOMALIES OF NERVOUS SYSTEM	24	11	13	22	10	12	2	1	1
745	BULBUS CORDIS ANOMALIES AND ANOMALIES OF CARDIAC SEPTAL CLOSURE	25	14	11	23	14	9	2	0	2
746	OTHER CONGENITAL ANOMALIES OF HEART	46	29	17	44	28	16	2	1	1
747	OTHER CONGENITAL ANOMALIES OF CIRCULATORY SYSTEM	30	15	15	28	14	14	2	1	1
748	CONGENITAL ANOMALIES OF RESPIRATORY SYSTEM	23	13	10	20	12	8	3	1	2
749	CLEFT PALATE AND CLEFT LIP	1	0	1	1	0	1	0	0	0
751	OTHER CONGENITAL ANOMALIES OF DIGESTIVE SYSTEM	5	3	2	3	2	1	2	1	1
753	CONGENITAL ANOMALIES OF URINARY SYSTEM	13	10	3	13	10	3	0	0	0
755	OTHER CONGENITAL ANOMALIES OF LIMBS	1	1	0	1	1	0	0	0	0
756	OTHER CONGENITAL MUSCULOSKELETAL ANOMALIES	12	4	8	12	4	8	0	0	0
758	CHROMOSOMAL ANOMALIES	13	7	6	11	5	6	2	2	0
759	OTHER AND UNSPECIFIED CONGENITAL ANOMALIES	20	11	9	19	11	8	1	0	1
*760 779	XV. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD	333	190	143	256	149	107	77	41	36
760	FETUS OR NEWBORN AFFECTED BY MATERNAL CONDITIONS WHICH MAY BE UNRELATED TO PRESENT PREGNANCY	2	1	1	2	1	1	0	0	0
761	FETUS OR NEWBORN AFFECTED BY MATERNAL COMPLICATIONS OF PREGNANCY	30	18	12	22	14	8	8	4	4
762	FETUS OR NEWBORN AFFECTED BY COMPLICATIONS OF PLACENTA CORD AND MEMBRANES	25	16	9	21	14	7	4	2	2
763	FETUS OR NEWBORN AFFECTED BY OTHER COMPLICATIONS OF LABOUR AND DELIVERY	2	1	1	1	0	1	1	1	0
764	SLOW FETAL GROWTH AND FETAL MALNUTRITION	2	1	1	1	1	0	1	0	1
765	DISORDERS RELATING TO SHORT GESTATION AND UNSPECIFIED LOW BIRTHWEIGHT	55	24	31	34	15	19	21	9	12
767	BIRTH TRAUMA	5	4	1	5	4	1	0	0	0
768	INTRAUTERINE HYPOXIA AND BIRTH ASPHYXIA	27	15	12	23	12	11	4	3	1
769	RESPIRATORY DISTRESS SYNDROME	39	27	12	36	25	11	3	2	1
770	OTHER RESPIRATORY CONDITIONS OF FETUS AND NEWBORN	72	39	33	55	28	27	17	11	6
771	INFECTIONS SPECIFIC TO THE PERINATAL PERIOD	7	3	4	7	3	4	0	0	0

ICD. LIST NUMBER	CAUSE OF DEATH XV. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD (CONTINUED)	***** T O T A L S *****			***** W H I T E *****			***** N O N - W H I T E *****		
		T O T A L S		FEM	W H I T E		FEM	N O N - W H I T E		FEM
		TOT	MALE		TOT	MALE		TOT	MALE	
772	FETAL AND NEONATAL HAEMORRHAGE	4	1	3	4	1	3	0	0	0
776	HAEMATOLOGICAL DISORDERS OF FETUS AND NEWBORN	5	4	1	5	4	1	0	0	0
777	PERINATAL DISORDERS OF DIGESTIVE SYSTEM	4	2	2	2	1	1	2	1	1
778	CONDITIONS INVOLVING THE INTEGUMENT AND TEMPERATURE REGULATION OF FETUS AND NEWBORN	2	1	1	2	1	1	0	0	0
779	OTHER AND ILL-DEFINED CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	52	33	19	36	25	11	16	8	8
*780 799	XVI. SYMPTOMS SIGNS, AND ILL-DEFINED CONDITIONS	399	221	178	348	190	158	51	31	20
780-789	SYMPTOMS	55	25	30	51	21	30	4	4	0
780	GENERAL SYMPTOMS	16	9	7	14	7	7	2	2	0
781	SYMPTOMS INVOLVING NERVOUS AND MUSCULOSKELETAL SYSTEMS	1	1	0	1	1	0	0	0	0
782	SYMPTOMS INVOLVING SKIN AND OTHER INTEGUMENTARY TISSUE	1	0	1	1	0	1	0	0	0
783	SYMPTOMS CONCERNING NUTRITION, METABOLISM AND DEVELOPMENT	2	1	1	1	0	1	1	1	0
785	SYMPTOMS INVOLVING CARDIOVASCULAR SYSTEM	28	12	16	27	11	16	1	1	0
786	SYMPTOMS INVOLVING RESPIRATORY SYSTEM AND OTHER CHEST SYMPTOM	4	1	3	4	1	3	0	0	0
789	OTHER SYMPTOMS INVOLVING ABDOMEN AND PELVIS	3	1	2	3	1	2	0	0	0
797-799	ILL-DEFINED AND UNKNOWN CAUSES OF MORBIDITY AND MORTALITY	344	196	148	297	169	128	47	27	20
797	SENILITY WITHOUT MENTION OF PSYCHOSIS	5	0	5	5	0	5	0	0	0
798	SUDDEN DEATH, CAUSE UNKNOWN	59	35	24	48	31	17	11	4	7
799	OTHER ILL-DEFINED AND UNKNOWN CAUSES OF MORBIDITY AND MORTALITY	280	161	119	244	138	106	36	23	13
*800 999	XVII. EXTERNAL CAUSES OF INJURY AND POISONING	2693	1847	846	2482	1702	780	210	144	66
800-807	RAILWAY ACCIDENTS	16	15	1	14	13	1	2	2	0
805	HIT BY ROLLING STOCK	16	15	1	14	13	1	2	2	0
810-819	MOTOR VEHICLE TRAFFIC ACCIDENTS	725	528	197	697	507	190	28	21	7
812	OTHER ACCIDENT INVOLVING COLLISION WITH ANOTHER MOTOR VEHICLE	252	175	77	244	169	75	8	6	2
813	INVOLVING COLLISION WITH OTHER VEHICLE	13	12	1	13	12	1	0	0	0
814	INVOLVING COLLISION WITH PEDESTRIAN	147	97	50	139	90	49	8	7	1
815	OTHER ACCIDENT INVOLVING COLLISION ON THE HIGHWAY	208	163	45	199	157	42	9	6	3
816	DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY	66	54	12	64	53	11	2	1	1
818	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT	9	6	3	9	6	3	0	0	0
819	OF UNSPECIFIED NATURE	30	21	9	29	20	9	1	1	0
820-825	MOTOR VEHICLE NONTRAFFIC ACCIDENTS	18	15	3	17	15	2	1	0	1
820	INVOLVING MOTOR-DRIVEN SNOW VEHICLE	5	5	0	5	5	0	0	0	0
821	INVOLVING OTHER OFF-ROAD MOTOR VEHICLE	2	2	0	2	2	0	0	0	0
822	OTHER ACCIDENT INVOLVING COLLISION WITH MOVING OBJECT	6	5	1	6	5	1	0	0	0
823	OTHER ACCIDENT INVOLVING COLLISION WITH STATIONARY OBJECT	2	0	2	1	0	1	1	0	1
825	OTHER ACCIDENT OF OTHER AND UNSPECIFIED NATURE	3	3	0	3	3	0	0	0	0
826-829	OTHER ROAD VEHICLE ACCIDENTS	4	4	0	4	4	0	0	0	0



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ICD. LIST NUMBER	CAUSE OF DEATH XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)	TOTALS				WHITE				NON-WHITE			
		TOT		FEM		TOT		FEM		TOT		FEM	
		MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM
826	PEDAL CYCLE ACCIDENT	4	4	0	0	4	4	0	0	0	0	0	0
830-838	WATER TRANSPORT ACCIDENTS	12	11	1	1	11	10	1	1	1	1	0	0
830	ACCIDENT TO WATERCRAFT CAUSING SUBMERSION	5	5	0	0	5	5	0	0	0	0	0	0
832	OTHER ACCIDENTAL SUBMERSION OR DROWNING IN WATER TRANSPORT ACCIDENT	5	5	0	0	4	4	0	0	1	1	0	0
838	OTHER AND UNSPECIFIED WATER TRANSPORT ACCIDENT	2	1	1	1	2	1	1	1	0	0	0	0
840-845	AIR AND SPACE TRANSPORT ACCIDENTS	10	10	0	0	10	10	0	0	0	0	0	0
840	ACCIDENT TO POWERED AIRCRAFT AT TAKEOFF OR LANDING	1	1	0	0	1	1	0	0	0	0	0	0
841	ACCIDENT TO POWERED AIRCRAFT, OTHER AND UNSPECIFIED	9	9	0	0	9	9	0	0	0	0	0	0
850-858	ACCIDENTAL POISONING BY DRUGS AND MEDICAMENTS	51	29	22	22	46	24	22	5	5	0	0	0
850	BY ANALGESICS, ANTIPIRETTIC, ANTIRHEUMATICS	7	6	1	1	7	6	1	0	0	0	0	0
853	BY TRANQUILLIZERS	1	1	0	0	0	0	0	1	1	0	0	0
854	BY OTHER PSYCHOTROPIC AGENTS	2	0	2	2	2	0	2	0	0	0	0	0
855	BY OTHER DRUGS ACTING ON CENTRAL AND AUTONOMIC NERVOUS SYSTEMS	6	5	1	1	5	4	1	1	1	0	0	0
856	BY ANTIBIOTICS	2	2	0	0	2	2	0	0	0	0	0	0
858	BY OTHER DRUGS	33	15	18	18	30	12	18	3	3	0	0	0
860-869	ACCIDENTAL POISONING BY OTHER SUBSTANCES GASES AND VAPOURS	26	19	7	7	25	19	6	1	0	1	0	1
860	BY ALCOHOL, NOT ELSEWHERE CLASSIFIED	3	3	0	0	3	3	0	0	0	0	0	0
862	BY PETROLEUM PRODUCTS, OTHER SOLVENTS AND THEIR VAPOURS, NOT ELSEWHERE CLASSIFIED	1	1	0	0	1	1	0	0	0	0	0	0
865	FROM FOODSTUFFS AND POISONOUS PLANTS	2	2	0	0	2	2	0	0	0	0	0	0
868	BY OTHER UTILITY GAS AND OTHER CARBON MONOXIDE	16	9	7	7	15	9	6	1	0	1	0	1
869	BY OTHER GASES AND VAPOURS	4	4	0	0	4	4	0	0	0	0	0	0
870-876	MISADVENTURE TO PATIENTS DURING SURGICAL AND MEDICAL CARE	9	4	5	5	8	4	4	1	0	1	0	1
870	ACCIDENTAL CUT, PUNCTURE, PERFORATION OR HAEMORRHAGE DURING MEDICAL CARE	6	2	4	4	5	2	3	1	0	1	0	1
873	FAILURE IN DOSAGE	1	1	0	0	1	1	0	0	0	0	0	0
876	OTHER AND UNSPECIFIED MISADVENTURES DURING MEDICAL CARE	2	1	1	1	2	1	1	0	0	0	0	0
878-879	SURGICAL & MEDICAL PROCEDURES AS CAUSE OF LATER COMPLICATION	60	29	31	31	56	28	28	4	1	3	0	0
878	SURGICAL OPERATION/OTHER PROCEDURES AS CAUSE OF ABNORMAL REACTION/LATER COMPLICATION W/O MENTION AT TIME OF OPERATION	53	27	26	26	51	26	25	2	1	1	0	0
879	OTHER PROCEDURES W/O MENTION AT TIME, AS CAUSE OF ABNORMAL REACTION OR LATER COMPLICATION	7	2	5	5	5	2	3	2	0	2	0	2
880-888	ACCIDENTAL FALLS	344	170	174	174	334	164	170	10	6	4	0	0
880	FALL ON OR FROM STAIRS OR STEPS	41	26	15	15	41	26	15	0	0	0	0	0
881	FALL ON OR FROM LADDERS OR SCAFFOLDING	8	7	1	1	8	7	1	0	0	0	0	0
882	FALL FROM OR OUT OF BUILDING OR OTHER STRUCTURE	15	13	2	2	15	13	2	0	0	0	0	0
883	FALL INTO HOLE OR OTHER OPENING IN SURFACE	3	1	2	2	3	1	2	0	0	0	0	0
884	OTHER FALL FROM ONE LEVEL TO ANOTHER	22	13	9	9	18	10	8	4	3	1	0	0
885	FALL ON SAME LEVEL FROM SLIPPING, TRIPPING OR STUMBLING	7	6	1	1	7	6	1	0	0	0	0	0



ICD. LIST		***** T O T A L S ***** W H I T E ***** N O N - W H I T E *****									
NUMBER	CAUSE OF DEATH	TOT	MALE	FEM	TOT	MALE	FEM	TOT	MALE	FEM	TOT
	XVII. EXTERNAL CAUSES OF INJURY AND POISONING										
	(CONTINUED)										
887	FRACTURE, CAUSE UNSPECIFIED	141	52	89	137	51	86	4	1	3	
888	OTHER AND UNSPECIFIED FALL	107	52	55	105	50	55	2	2	0	
890-899	ACCIDENTS CAUSED BY FIRES AND FLAMES	73	47	26	66	44	22	7	3	4	
890	CONFLAGRATION IN PRIVATE DWELLING	61	39	22	54	36	18	7	3	4	
891	CONFLAGRATION IN OTHER AND UNSPECIFIED BUILDING OR STRUCTURE	4	3	1	4	3	1	0	0	0	
893	ACCIDENT CAUSED BY IGNITION OF CLOTHING	3	2	1	3	2	1	0	0	0	
894	IGNITION OF HIGHLY INFLAMMABLE MATERIAL	1	1	0	1	1	0	0	0	0	
897	ACCIDENT CAUSED BY CONTROLLED FIRE NOT IN BUILDING OR STRUCTURE	1	1	0	1	1	0	0	0	0	
898	ACCIDENT CAUSED BY OTHER SPECIFIED FIRE AND FLAMES	3	1	2	3	1	2	0	0	0	
900-909	ACCIDENTS CAUSED BY NATURAL AND ENVIRONMENTAL FACTORS	26	17	9	22	14	8	4	3	1	
900	EXCESSIVE HEAT	1	1	0	1	1	0	0	0	0	
901	EXCESSIVE COLD	22	15	7	18	12	6	4	3	1	
904	HUNGER, THIRST, EXPOSURE, NEGLIGENCE	1	0	1	1	0	1	0	0	0	
905	VENOHOUS ANIMALS AND PLANTS AS THE CAUSE OF POISONING AND TOXIC REACTIONS	1	1	0	1	1	0	0	0	0	
907	LIGHTNING	1	0	1	1	0	1	0	0	0	
910-915	ACCIDENTS CAUSED BY SUBMERSION SUFFOCATION & FOREIGN BODIES	218	143	75	199	131	68	19	12	7	
910	ACCIDENTAL DROWNING AND SUBMERSION	69	59	10	59	49	10	10	10	0	
911	INHALATION AND INGESTION OF FOOD CAUSING OBSTRUCTION OF RESPIRATORY TRACT OR SUFFOCATION	43	22	21	39	21	18	4	1	3	
912	INHALATION AND INGESTION OF OTHER OBJECT CAUSING OBSTRUCTION OF RESPIRATORY TRACT OR SUFFOCATION	90	51	39	86	50	36	4	1	3	
913	ACCIDENTAL MECHANICAL SUFFOCATION	16	11	5	15	11	4	1	0	1	
916-928	OTHER ACCIDENTS	124	96	28	119	91	28	5	5	0	
916	STRUCK ACCIDENTALLY BY FALLING OBJECT	11	11	0	10	10	0	1	1	0	
917	STRIKING AGAINST OR STRUCK ACCIDENTALLY BY OBJECTS OR OR PERSON	2	1	1	2	1	1	0	0	0	
918	CAUGHT ACCIDENTALLY IN OR BETWEEN OBJECTS	5	5	0	5	5	0	0	0	0	
919	ACCIDENTS CAUSED BY MACHINERY	9	9	0	9	9	0	0	0	0	
920	ACCIDENTS CAUSED BY CUTTING AND PIERCING INSTRUMENTS OR OBJECT	1	1	0	0	0	0	1	1	0	
922	ACCIDENT CAUSED BY FIREARM MISSILE	10	9	1	10	9	1	0	0	0	
923	ACCIDENT CAUSED BY EXPLOSIVE MATERIAL	4	3	1	4	3	1	0	0	0	
924	ACCIDENT CAUSED BY HOT SUBSTANCE OR OBJECT, CAUSTIC OR CORROSION MATERIAL AND STEAM	5	1	4	5	1	4	0	0	0	
925	ACCIDENT CAUSED BY ELECTRIC CURRENT	18	18	0	15	15	0	3	3	0	
928	OTHER AND UNSPECIFIED ENVIRONMENTAL AND ACCIDENTAL CAUSES	59	38	21	59	38	21	0	0	0	
929-929	LATE EFFECTS OF ACCIDENTAL INJURY	7	5	2	7	5	2	0	0	0	
929	LATE EFFECTS OF ACCIDENTAL INJURY	7	5	2	7	5	2	0	0	0	
930-949	DRUGS MEDICAMENTS AND BIOLOGICAL SUBSTANCES IN THERAPY	3	2	1	3	2	1	0	0	0	
930	ANTIBIOTICS	1	1	0	1	1	0	0	0	0	
947	OTHER AND UNSPECIFIED DRUGS AND MEDICAMENTS	1	0	1	1	0	1	0	0	0	

1987

ICD. LIST NUMBER	CAUSE OF DEATH XVII. EXTERNAL CAUSES OF INJURY AND POISONING (CONTINUED)	TOTALS				WHITE				NON-WHITE			
		TOT		FEM		TOT		FEM		TOT		FEM	
		MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM	MALE	FEM
949	OTHER VACCINES AND BIOLOGICAL SUBSTANCES	1	1	0	0	1	1	0	0	0	0	0	0
950-959	SUICIDE AND SELF-INFLICTED INJURY	577	435	142	134	549	415	134	28	20	8	8	8
950	BY SOLID OR LIQUID SUBSTANCES	84	36	48	46	79	33	46	5	3	2	2	2
952	BY OTHER GASES AND VAPOURS	65	39	26	24	63	39	24	2	0	2	2	2
953	BY HANGING, STRANGULATION AND SUFFOCATION	187	152	35	32	179	147	32	8	5	3	3	3
954	BY SUBMERSION (DROWNING)	22	17	5	5	21	16	5	1	1	0	0	0
955	BY FIREARMS AND EXPLOSIVES	162	142	20	20	154	134	20	8	8	0	0	0
956	BY CUTTING AND PIERCING INSTRUMENTS	7	6	1	1	7	6	1	0	0	0	0	0
957	BY JUMPING FROM HIGH PLACE	28	22	6	5	26	21	5	2	1	1	1	1
958	BY OTHER AND UNSPECIFIED MEANS	22	21	1	1	20	19	1	2	2	0	0	0
960-969	HOMICIDE AND INJURY PURPOSELY INFLICTED BY OTHER PERSONS	195	123	72	52	128	76	52	67	47	20	20	20
960	FIGHT, BRAWL, RAPE	2	2	0	0	2	2	0	0	0	0	0	0
963	ASSAULT BY HANGING AND STRANGULATION	11	2	9	5	7	2	5	4	0	4	4	4
964	ASSAULT BY SUBMERSION (DROWNING)	6	3	3	3	5	2	3	1	1	0	0	0
965	ASSAULT BY FIREARMS AND EXPLOSIVES	74	54	20	13	43	30	13	31	24	7	7	7
966	ASSAULT BY CUTTING AND PIERCING INSTRUMENT	60	40	20	14	38	24	14	22	16	6	6	6
968	ASSAULT BY OTHER AND UNSPECIFIED MEANS	41	21	20	17	32	15	17	9	6	3	3	3
969	LATE EFFECTS OF INJURY PURPOSELY INFLICTED BY OTHER PERSON	1	1	0	0	1	1	0	0	0	0	0	0
970-978	LEGAL INTERVENTION	2	2	0	0	1	1	0	1	1	0	0	0
970	BY FIREARMS	2	2	0	0	1	1	0	1	1	0	0	0
980-989	INJURY UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	193	143	50	41	166	125	41	26	17	9	9	9
980	POISONING BY SOLID OR LIQUID SUBSTANCES, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	155	112	43	36	133	97	36	22	15	7	7	7
982	POISONING BY OTHER GASES, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	3	2	1	1	3	2	1	0	0	0	0	0
983	HANGING, STRANGULATION OR SUFFOCATION, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	1	1	0	0	1	1	0	0	0	0	0	0
984	SUBMERSION (DROWNING), UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	16	14	2	2	14	12	2	1	1	0	0	0
985	INJURY BY FIREARMS AND EXPLOSIVES, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	4	3	1	0	3	3	0	1	0	1	1	1
986	INJURY BY CUTTING AND PIERCING INSTRUMENTS, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	1	1	0	0	1	1	0	0	0	0	0	0
987	FALLING FROM HIGH PLACE, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	2	1	1	1	1	1	0	1	0	1	1	1
988	INJURY BY OTHER AND UNSPECIFIED MEANS, UNDETERMINED WHETHER ACCIDENTALLY OR PURPOSELY INFLICTED	11	9	2	2	10	8	2	1	1	0	0	0
***	RESIDENT GRAND TOTALS	55562	27036	28526	27627	53522	25895	27627	20381	139	899	899	899
TOTALS INCLUDE 2 OF UNKNOWN RACE: 2 MALES AND 0 FEMALES.													

# **NEONATAL AND INFANT MORTALITY**



## SECTION D

### NEONATAL AND INFANT DEATHS

Resident infant deaths (deaths less than 1 year of age) decreased by 12.5% in Massachusetts from 695 in 1986 to 608 in 1987. The rate of infant deaths also decreased from 8.4 per 1,000 live births in 1986 to 7.2 in 1987. As with live births and deaths, all Massachusetts resident infant deaths are included regardless of the state in which they occurred. Neonatal deaths (deaths under 28 days of age) also decreased, from 478 in 1986 to 432 in 1987, a decrease of 9.6%. The rate of neonatal deaths per 1,000 live births showed a decrease from 5.8 in 1986 to 5.1 in 1987.

#### INFANT DEATHS BY RACE

In 1987, the white infant mortality rate was 6.6, a decrease from the 1986 rate of 7.6. The black infant mortality rate was 15.5, reflecting a decrease from the 1986 rate of 19.7. The neonatal mortality rate for white infants was 4.6 deaths per 1,000 live births, and the neonatal mortality rate for black infants was 11.2 per 1,000 live births.

The decrease in infant deaths in 1987 occurred within both the white and black populations.

#### INFANT DEATHS BY AGE

Of all infant deaths, 46.9% occurred within the first 24 hours and 61.2% within the first week of life.

#### INFANT DEATHS BY CAUSE

The leading cause of infant deaths did not vary from 1986 to 1987. The major cause of death was certain conditions originating in the perinatal period (medical conditions arising from approximately 28 weeks gestation to 28 days of age). These deaths accounted for 54.1% of all infant deaths. The second leading cause of infant deaths was congenital anomalies, which accounted for 20.6% of infant deaths.

#### NEONATAL MORTALITY BY BIRTHWEIGHT

Neonatal mortality is highly correlated to low birthweight. Low birthweight babies (under 2,500 grams or 5 pounds, 8 ounces) accounted for 5.7% of all babies born in Massachusetts in 1987.

#### HEALTH OBJECTIVES FOR 1990

The U.S. Department of Health and Human Services has developed health objectives for 1990 in numerous areas (HEALTHY PEOPLE: Surgeon General's Report on Health Promotion and Disease Prevention; 1979). Presented below is an assessment of Massachusetts compared to the 1990 objectives using 1987 infant and neonatal mortality data.

##### 1990 OBJECTIVE:

Infant mortality rate should not exceed nine deaths per 1,000 live births.

Neonatal mortality rate should not exceed 6.5 deaths per 1,000 live births.

##### MASSACHUSETTS--1987:

There were 7.2 deaths per 1,000 live births.

In 1987, the Massachusetts rate was 5.1 per 1,000 live births.



No racial or ethnic group of the population should have an infant mortality rate in excess of 12 deaths per 1,000 live births.

In 1987, the white infant mortality rate was 6.6, and the black infant mortality rate was 15.5.

#### **DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:**

##### **INFANT DEATH**

Death of a child whose age is less than one year (365 days).

##### **NEONATAL DEATH**

Death of a child whose age is less than 28 days.

##### **FETAL DEATH**

A fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation the fetus does not breath or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

Massachusetts law requires that fetal deaths of 20 or more weeks gestation or of a weight of at least 350 grams be reported; therefore, the fetal deaths referred to in this report are of that gestational age or weight.

#### **RATES IMPORTANT FOR THIS SECTION INCLUDE:**

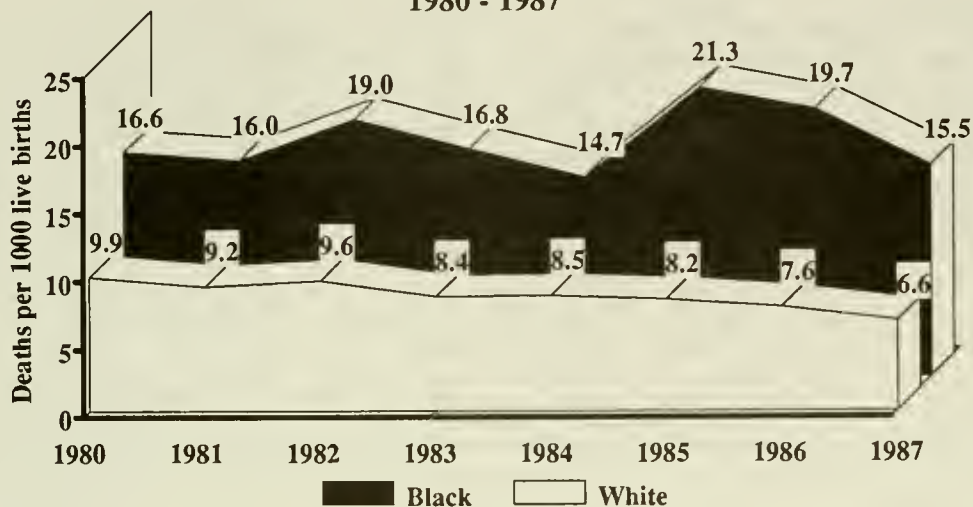
##### **INFANT MORTALITY RATE**

$$\frac{\text{Number of Resident Deaths at Less than 1 Year of Age}}{\text{Total Resident Live Births}} \times 1,000$$

##### **NEONATAL MORTALITY RATE**

$$\frac{\text{Number of Resident Deaths at Less Than 28 Days of Age}}{\text{Total Resident Live Births}} \times 1,000$$

**FIGURE D-1**  
**INFANT MORTALITY RATES**  
**MASSACHUSETTS**  
**1980 - 1987**



**FIGURE D-2**  
**NEONATAL MORTALITY RATES**  
**MASSACHUSETTS**  
**1980 - 1987**

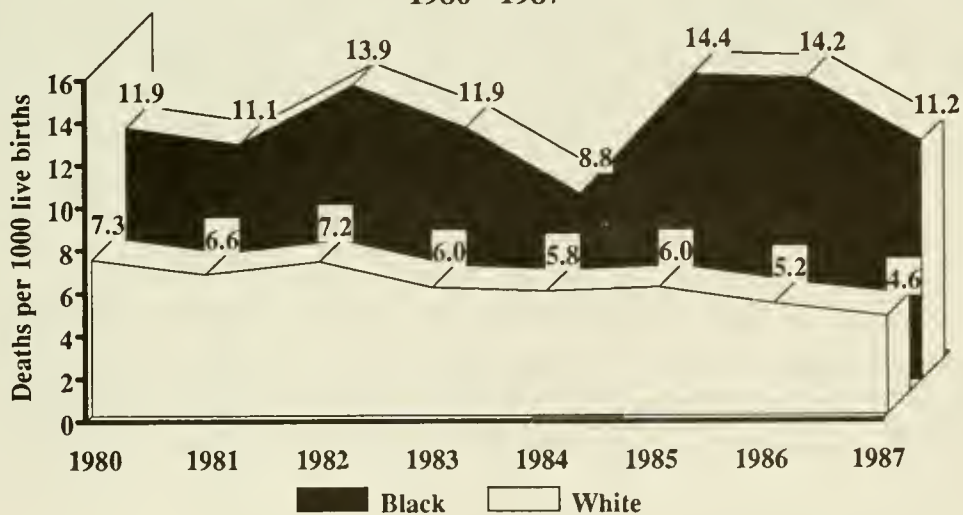


TABLE D-1  
RESIDENT INFANT AND NEONATAL DEATHS  
MASSACHUSETTS AND UNITED STATES RESIDENT DEATHS  
1970-1987

Year	Deaths Under One Year			Deaths Under 28 Days		
	Number of Massachusetts Infant Deaths	Rate Per 1,000 Live Births		Number of Massachusetts Neonatal Deaths	Rate Per 1,000 Live Births	
		Massachusetts	United States		Massachusetts	United States
1970	1,583	16.9	20.0	1,231	13.1	15.1
1971	1,462	16.8	19.1	1,130	13.0	14.2
1972	1,164	15.1	18.5	896	11.6	13.6
1973	1,104	15.2	17.7	861	11.9	13.0
1974	976	13.9	16.7	763	10.8	12.3
1975	903	13.2	16.1	678	9.9	11.6
1976	799	12.1	15.2	585	8.9	10.9
1977	806	11.8	14.1	616	9.1	9.9
1978	753	11.0	13.8	552	8.1	9.5
1979	760	10.8	13.1	564	8.0	8.9
1980	748	10.3	12.6	550	7.6	8.5
1981	710	9.6	11.9	510	6.9	8.0
1982	764	10.1	11.5	573	7.6	7.7
1983	682	9.0	11.2	482	6.3	7.3
1984	699	8.9	10.8	472	6.0	7.0+
1985	745	9.1	10.6	538	6.6	7.0
1986	695	8.4	10.4	478	5.8	6.7
1987	608	7.2	10.1	432	5.1	6.5

+Revised.

TABLE D-2  
TRENDS IN INFANT AND NEONATAL MORTALITY  
BY RACE OF INFANT  
MASSACHUSETTS RESIDENT DEATHS  
1980-1987

INFANT

	Deaths Under One Year							
	Total		Race					
			White		Black		Other	
Year	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1980	748	10.3	655	9.9	87	16.6	5	4.0
1981	710	9.6	616	9.2	85	16.0	8	5.3
1982	764	10.1	656	9.6	102	19.0	5	2.9
1983	682	9.0	579	8.4	89	16.8	12	6.6
1984	699	8.9	601	8.5	82	14.7	13	6.6
1985	745	9.1	608	8.2	126	21.3	11	5.3
1986	695	8.4	560	7.6	123	19.7	11	4.0
1987	608	7.2	486	6.6	110	15.5	12	3.9

NEONATAL

	Death Under 28 Days							
	Total		Race					
			White		Black		Other	
Year	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1980	550	7.6	483	7.3	62	11.9	5	4.0
1981	510	6.9	442	6.6	59	11.1	5	3.3
1982	573	7.6	494	7.2	75	13.9	3	**
1983	482	6.3	411	6.0	63	11.9	7	3.8
1984	472	6.0	411	5.8	49	8.8	8	4.0
1985	538	6.6	447	6.0	85	14.4	5	2.4
1986	478	5.8	383	5.2	89	14.2	5	1.8
1987	432	5.1	343	4.6	80	11.2	9	2.9

\*\*Calculations based on fewer than 5 events are excluded.

Note: Deaths of infants of unknown race are excluded except for the total calculation. Births of infants of unknown race are allocated into the race categories according to the distribution of births of known races for rate computations.

TABLE D-3  
NEONATAL MORTALITY BY BIRTHWEIGHT\*  
MASSACHUSETTS RESIDENT BIRTHS/DEATHS  
1980-1986

All Birthweights		<500 grams	500-1499 grams	1500-2499 grams	2500-4499 grams	4500-8165 grams	Unknown
1980 Deaths	539	85	237	73	112	4	28
Births	72,627	90	650	3,687	66,714	1,398	88
Rate	7.4	944.4	364.6	19.8	1.7	2.9	318.2
1981 Deaths	467	74	202	56	95	4	36
Births	73,960	84	666	3,687	67,968	1,474	81
Rate	6.3	881.0	303.3	15.2	1.4	2.7	444.4
1982 Deaths	567	90	263	69	127	3	15
Births	75,771	91	752	3,614	69,785	1,461	68
Rate	7.5	989.0	349.7	19.1	1.8	2.0	220.6
1983 Deaths	484	90	210	53	103	3	25
Births	76,080	96	709	3,688	69,906	1,594	87
Rate	6.4	937.5	296.2	14.4	1.5	1.9	287.4
1984 Deaths	479	87	172	60	98	3	59
Births	78,237	94	667	3,839	71,826	1,693	118
Rate	6.1	925.5	257.9	15.6	1.4	1.8	500.0
1985 Deaths	534	117	193	72	119	7	26
Births	81,844	123	754	3,910	75,216	1,746	95
Rate	6.5	951.2	256.0	18.4	1.6	4.0	273.7
1986 Deaths	479	101	166	59	100	9	44
Births	82,324	107	693	3,880	74,648	1,849	1,147
Rate	5.8	943.9	239.5	15.2	1.3	4.9	38.4

\* The figures used in this table cannot be directly compared with other tables in this report. Neonatal mortality statistics by birthweight include deaths to infants less than 28 days old who were born to residents of Massachusetts. Deaths occurring in January of the subsequent year are included if the birth occurred in December of the data year. Deaths occurring in January of the data year are not included if the birth occurred in December of the previous year. Denominators are resident births of the data year.

Due to major changes in the birth certificate computer file in 1987, the linked neonatal death and birth tape is not yet available.



FIGURE D-3

NEONATAL DEATHS BY MEAN BIRTHWEIGHT

1969 - 1986

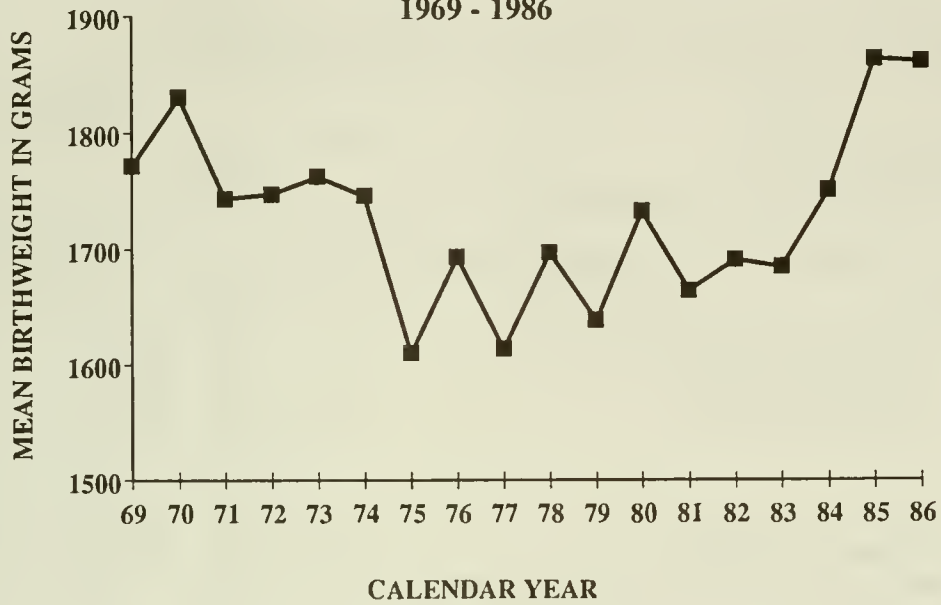


TABLE D-4  
NEONATAL AND INFANT DEATHS  
BY SELECTED UNDERLYING CAUSES  
MASSACHUSETTS RESIDENT DEATHS  
1987

		Neonatal <28 days		Infant <1 year	
Underlying Cause	ICD-9	#	%	#	%
TOTAL		432	100.0	608	100.0
Septicaemia	038	1	**	6	1.0
Diseases of the Nervous System and Sense Organs	320 - 329	1	**	3	**
Diseases of the Circulatory System	390 - 459	4	**	15	2.5
Diseases of the Respiratory System	460 - 519	1	**	10	1.6
Diseases of the Digestive System	520 - 579	2	**	6	1.0
Congenital Anomalies	740 - 759	88	20.4	125	20.6
Congenital Anomalies of the Nervous System	740 - 742	8		13	
Congenital Anomalies of the Heart	745 - 746	12		30	
Other Congenital Anomalies of the Circulatory System	747	10		15	
Congenital Anomalies of the Respiratory System	748	18		22	
Congenital Anomalies of the Digestive System	749 - 751	3		4	
Congenital Anomalies of the Musculoskeletal System	753 - 756	16		17	
Chromosomal Anomalies	758	6		8	
Other and Unspecified Congenital Anomalies	759	15		16	
Certain Conditions Originating in the Perinatal Period	760 - 779	319	73.8	329	54.1
Newborn Affected by Maternal Complications of Pregnancy	761	30		30	
Newborn Affected by Complications of Placenta, Cord, & Membranes	762	25		25	
Disorders Relating to Short Gestation & Unspecified Low Birthweight	765	55		55	
Intrauterine Hypoxia and Birth Asphyxia	768	26		27	
Respiratory Distress Syndrome	769	38		39	
Other Respiratory Conditions	770	63		70	
Infections Specific to the Perinatal Period	771	6		6	
Other & Ill-defined Conditions Originating in the Perinatal Period	779	52		52	
Sudden Infant Death Syndrome	798.0	6	1.4	57	9.4
Injuries	E800 - E999	2	**	16	2.6
All Other Causes	Residual	8	1.8	41	6.7

\*\*Calculations based on fewer than five events are excluded.

TABLE D-5  
 INFANT AND NEONATAL DEATHS BY AGE, SEX, AND RACE  
 MASSACHUSETTS RESIDENT DEATHS  
 1987

	Total			White			Black			Other		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total (less than one year)* Rate	608 7.2	341 7.9	265 6.5	486 6.6	281 7.4	204 5.7	110 15.5	54 15.1	55 15.5	12 3.9	6 3.7	6 4.0
Less Than One Day*	285	146	137	213	112	100	64	31	32	8	3	5
1 Day	34	21	13	28	17	11	5	3	2	1	1	--
2 Days	16	10	6	14	8	6	2	2	--	--	--	--
3 Days	10	6	4	10	6	4	--	--	--	--	--	--
4 Days	11	8	3	11	8	3	--	--	--	--	--	--
5 Days	10	6	4	8	4	4	2	2	--	--	--	--
6 Days	6	2	4	5	2	3	1	--	1	--	--	--
Less Than One Week* Rate	372 4.4	199 4.6	171 4.2	289 3.9	157 4.1	131 3.6	74 10.4	38 10.6	35 9.9	9 2.9	4 2.5	5 3.4
7-13 Days	25	14	11	23	13	10	2	1	1	--	--	--
14-27 Days	35	23	12	31	22	9	4	1	3	--	--	--
Less Than 28 Days* Rate	432 5.1	236 5.4	194 4.7	343 4.6	192 5.0	150 4.2	80 11.2	40 11.2	39 11.0	9 2.9	4 2.5	5 3.4
1 Month	37	22	15	32	19	13	5	3	2	--	--	--
2 Months	36	18	18	27	14	13	7	3	4	2	1	1
3 Months	24	18	6	21	17	4	3	1	2	--	--	--
4 Months	18	10	8	12	7	5	5	2	3	1	1	--
5 Months	16	9	7	13	8	5	3	1	2	--	--	--
6 Months	10	5	5	9	5	4	1	--	1	--	--	--
7 Months	5	4	1	5	4	1	--	--	--	--	--	--
8 Months	8	5	3	7	5	2	1	--	1	--	--	--
9 Months	9	6	3	8	5	3	1	1	--	--	--	--
10 Months	6	4	2	4	3	1	2	1	1	--	--	--
11 Months	7	4	3	5	2	3	2	2	--	--	--	--

"--" Indicates zero events.

\*Total includes two births of unknown sex. In calculating the infant mortality rate by race, births of unknown race have been allocated to white, black, and other based on their percents of total births with reported race.



# MARRIAGES AND DIVORCES





## SECTION E

### MARRIAGES AND DIVORCES

Marriages and divorces are reported by place of occurrence in Massachusetts. For example, if two Springfield residents are married in Boston, this marriage will be reported by place of occurrence (Boston) rather than residence of the couple (Springfield). Marriages have traditionally been reported in this manner because of the number of couples who live in different communities.

Marriages and divorces which involve Massachusetts residents, but occur in other states, are not included in these figures. No system of interstate exchange exists for these events. Unlike some states, Massachusetts marriage and divorce laws neither encourage out-of-state residents to come to the state nor discourage residents from using the Massachusetts system by imposing long waiting periods, etc. This allows the marriage data to be used to estimate resident marriages.

In 1987, 49,034 marriages occurred in Massachusetts, compared to 49,990 in 1986, a decrease of 1.9%. The rate of marriages was 8.4 per 1,000 population in 1987, a slight decrease from the 1986 rate of 8.6. The U.S. rate of marriages per 1,000 population decreased from 10.0 per 1,000 population in 1986 to 9.9 in 1987. Of the brides, 74.8% had never previously been married. This percentage was slightly less among the grooms--73.1%.

In 1987, 16,994 divorces were granted in Massachusetts, a decrease of 14.2% from the 19,809 divorces granted in 1986. The 1987 rate of divorce per 1,000 population in Massachusetts was 2.9. This was well below the 1987 U.S. rate of 4.8 divorces per 1,000 population, which decreased from the 1986 U.S. rate of 4.9 divorces per 1,000 population.

#### DEFINITIONS AND RATES IMPORTANT FOR THIS SECTION INCLUDE:

MARRIAGE RATE  $\frac{\text{Number of Occurrence Marriages}}{\text{Total Population}} \times 1,000$

DIVORCE RATE  $\frac{\text{Number of Occurrence Divorces}}{\text{Total Population}} \times 1,000$



TABLE E-1  
MARRIAGES AND DIVORCES BY COUNTY  
MASSACHUSETTS OCCURRENCE  
1987

	Marriages	Divorces
STATE	49,034	16,994
Counties		
Barnstable	2,062	448
Berkshire	1,218	465
Bristol	4,085	1,642
Dukes	254	60
Essex	5,807	2,018
Franklin	560	237
Hampden	3,634	1,475
Hampshire	1,093	357
Middlesex	11,250	3,822
Nantucket	198	27
Norfolk	4,887	1,328
Plymouth	3,294	1,516
Suffolk	5,144	1,206
Worcester	5,548	2,393

**FIGURE E-1**  
**RATES OF MARRIAGES AND DIVORCES**  
**PER THOUSAND POPULATION**  
**1900-1987**

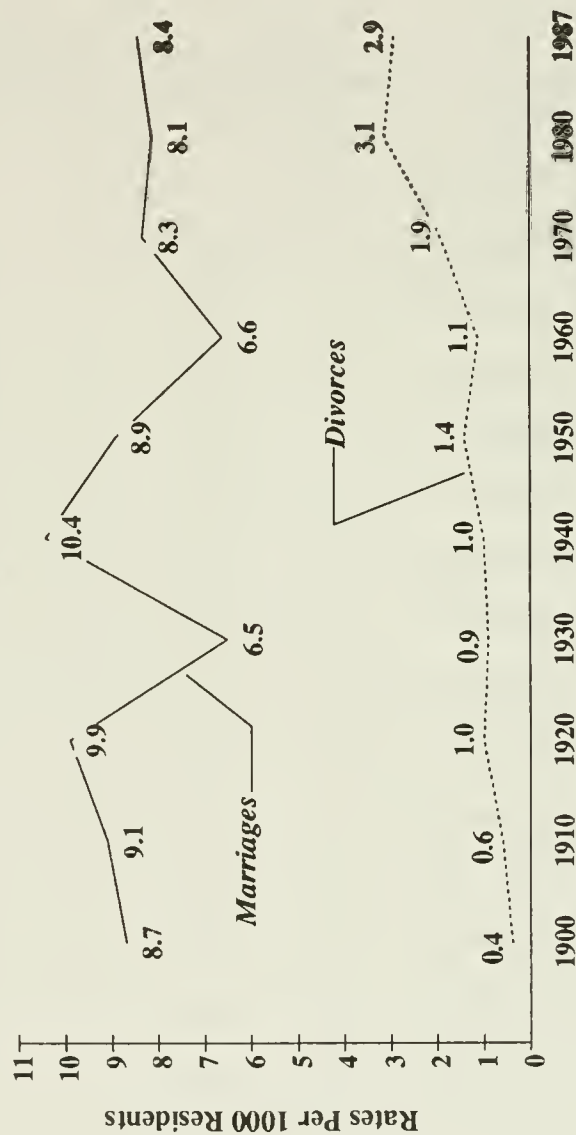


TABLE E-2  
MARRIAGES AND DIVORCES AND RATES PER 1,000 POPULATION  
MASSACHUSETTS OCCURRENCE  
1900-1987

Year	Marriages		Divorces	
	Number	Rate	Number	Rate
1900	24,342	8.7	1,258	0.4
1905	27,184	9.1	1,554	0.5
1910	30,710	9.1	1,929	0.6
1915	31,301	8.5	2,252	0.6
1920	38,048	9.9	3,647	1.0
1925	31,238	7.5	3,395	0.8
1930	27,431	6.5	3,746	0.9
1935	30,019	6.9	4,081	0.9
1940	44,836	10.4	4,502	1.0
1945	38,197	8.5	6,833	1.5
1950	41,711	8.9	6,365	1.4
1955	35,585	7.3	5,601	1.2
1960	34,050	6.6	5,592	1.1
1965	38,281	7.2	7,728	1.5
1970	47,292	8.3	10,818	1.9
1975	42,103	7.3	16,460	2.8
1980	46,273	8.1	17,873	3.1
1981	47,802	8.3	19,502	3.4
1982	48,654	8.4	19,531	3.4
1983	48,789	8.4	18,477	3.2
1984	50,302	8.7	17,123	3.0
1985	49,849	8.6	21,573	3.7
1986	49,990	8.6	19,809	3.4
1987	49,034	8.4	16,994	2.9



TABLE E-3  
MARRIAGES BY AGE AND MARITAL STATUS  
MASSACHUSETTS OCCURRENCE  
1987

Age	Total		BRIDE		Widowed		Divorced	
	Number	%*	Number	%	Number	%	Number	%
TOTAL	49,034	100.0	36,666	74.8	1,152	2.3	11,216	22.9
<20	2,943	6.0	2,922	6.0	2	**	19	**
20-29	30,762	62.7	27,787	56.7	79	0.1	2,896	5.9
30-39	10,872	22.2	5,379	11.0	182	0.4	5,311	10.8
40-49	3,046	6.2	465	0.9	247	0.5	2,334	4.8
50-59	870	1.8	68	0.1	262	0.5	540	1.1
60-69	382	0.8	33	0.1	247	0.5	102	0.2
≥70	159	0.3	12	**	133	0.3	14	**
Age	Total		GROOM		Widowed		Divorced	
	Number	%	Number	%	Number	%	Number	%
TOTAL	49,034	100.0	35,825	73.1	1,155	2.3	12,054	24.6
<20	960	2.0	959	2.0	0	--	1	**
20-29	27,747	56.6	26,060	53.1	14	**	1,673	3.4
30-39	13,462	27.4	7,881	16.1	84	0.2	5,497	11.2
40-49	4,240	8.6	741	1.5	163	0.3	3,336	6.8
50-59	1,602	3.3	125	0.3	283	0.6	1,194	2.4
60-69	698	1.4	40	0.1	356	0.7	302	0.6
≥70	325	0.7	19	**	255	0.5	51	0.1

\*All percentages are based on the total number of marriages, e.g., single brides between the ages of 20 and 27 equal 56.7% of all brides married in Massachusetts in 1987.

\*\*Percentage less than 0.1.

--Equal to zero events.

TABLE E-4  
NUMBER OF MARRIAGES BY AGE OF BRIDE AND AGE OF GROOM  
MASSACHUSETTS OCCURRENCE  
1987

AGE OF BRIDE	TOTAL	AGE OF GROOM						
		<20	20-29	30-39	40-49	50-59	60-69	≥70
TOTAL	49,034	960	27,747	13,462	4,240	1,602	698	325
<20	2,943	645	2,184	102	11	1	0	0
20-29	30,762	299	23,143	6,584	671	55	8	2
30-39	10,872	16	2,301	6,069	2,068	368	47	3
40-49	3,046	0	116	681	1,354	723	151	21
50-59	870	0	3	25	128	401	267	46
60-69	382	0	0	1	6	50	199	126
≥70	159	0	0	0	2	4	26	127

TABLE E-5  
NUMBER OF MARRIAGES FOR BRIDE BY NUMBER OF MARRIAGES FOR GROOM  
MASSACHUSETTS OCCURRENCE  
1987

NUMBER OF MARRIAGES						
BRIDE	GROOM					
	TOTAL	1	2	3	4	≥5
TOTAL	49,034	35,823	11,309	1,705	177	20
1	36,661	31,066	5,501	508	34	2
2	10,609	4,323	5,309	872	93	12
3	1,586	407	854	286	36	3
4	159	26	88	32	12	1
≥5	19	1	7	7	2	2



# POPULATION



## **SECTION F**

### **POPULATION**

The population data in this section are presented for use in computing rates for small areas and for reporting changes over time by municipality, county, and health service areas. They are based primarily on the federal census for decennial years, e.g., 1980, and on the Commonwealth census for intercensal years, e.g., 1975, and on the Massachusetts Institute for Social and Economic Research (MISER) estimates for 1985 (see Table F-2).

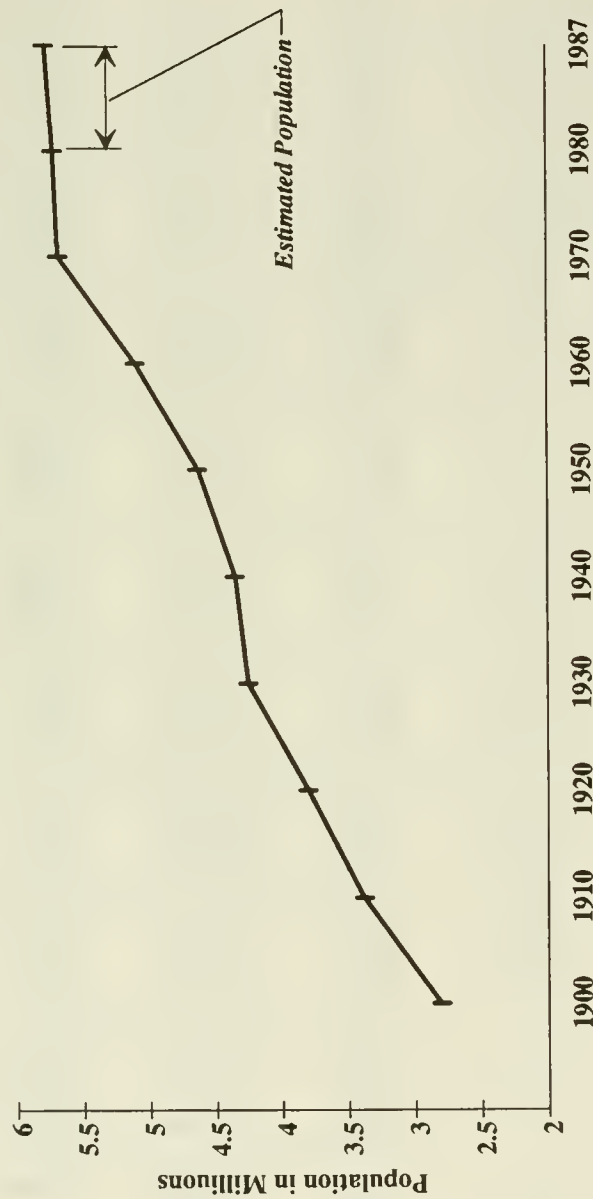
Prior to 1985, the Massachusetts State Census method of enumeration differed from the federal census. Generally, the state figures excluded non-resident students and military families residing in the Commonwealth; they are included in the U.S. census definition of resident.

The Massachusetts population estimates for 1980-1987 (Table F-4) are interpolations based on the 1980 federal census and the 1990 population projections provided by MISER.





**FIGURE F-1**  
**MASSACHUSETTS POPULATION**  
**1900-1987**



**TABLE F-1**  
**POPULATION BY RACE, AGE AND SEX**  
**MASSACHUSETTS**  
**1980**

<i>AGE</i>	<i>SEX</i>	<i>TOTAL</i>	<i>WHITE</i>	<i>BLACK</i>	<i>OTHER &amp; UNKNOWN</i>
UNDER 1	MALE	36,771	32,822	2,076	1,873
	FEMALE	34,959	31,174	1,938	1,847
	TOTAL	71,730	63,996	4,014	3,720
1-4	MALE	136,258	122,083	7,454	6,721
	FEMALE	129,227	115,440	7,190	6,597
	TOTAL	265,485	237,523	14,644	13,318
5-9	MALE	191,602	173,505	9,866	8,231
	FEMALE	183,132	165,337	9,819	7,976
	TOTAL	374,734	338,842	19,685	16,207
10-14	MALE	235,669	216,445	11,636	7,588
	FEMALE	225,663	206,831	11,429	7,403
	TOTAL	461,332	423,276	23,065	14,991
15-19	MALE	274,859	253,767	12,934	8,158
	FEMALE	273,380	252,117	13,106	8,157
	TOTAL	548,239	505,884	26,040	16,315
20-24	MALE	270,713	250,616	11,558	8,539
	FEMALE	282,189	260,612	12,809	8,768
	TOTAL	552,902	511,228	24,367	17,307
25-29	MALE	239,341	221,554	9,952	7,835
	FEMALE	249,834	230,586	11,031	8,217
	TOTAL	489,175	452,140	20,983	16,052
30-34	MALE	217,649	202,785	8,306	6,558
	FEMALE	228,746	211,798	9,634	7,314
	TOTAL	446,395	414,583	17,940	13,872
35-39	MALE	169,502	158,362	6,577	4,563
	FEMALE	179,050	166,127	7,956	4,967
	TOTAL	348,552	324,489	14,533	9,530
40-44	MALE	134,925	126,332	5,013	3,580
	FEMALE	143,823	134,182	5,866	3,775
	TOTAL	278,748	260,514	10,879	7,355

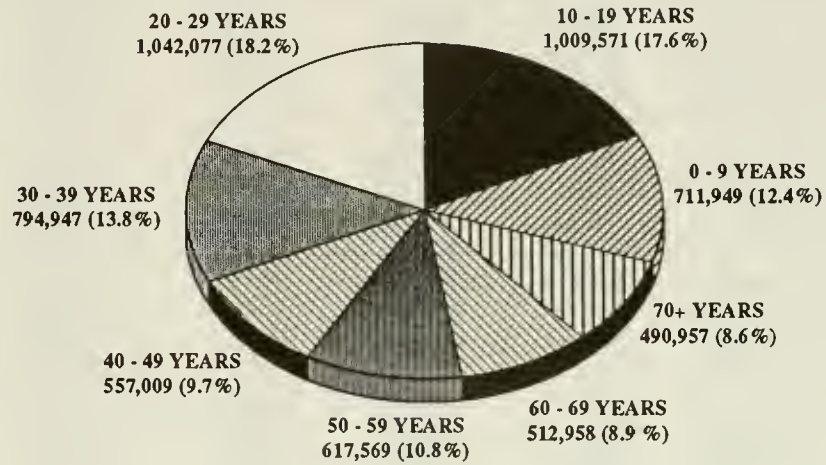
**TABLE F-1 (continued)**  
**POPULATION BY RACE, AGE AND SEX**  
**MASSACHUSETTS**  
**1980**

<i>AGE</i>	<i>SEX</i>	<i>TOTAL</i>	<i>WHITE</i>	<i>BLACK</i>	<i>OTHER &amp; UNKNOWN</i>
45-49	MALE	134,444	127,300	4,329	2,815
	FEMALE	143,817	135,730	5,030	3,057
	TOTAL	278,261	263,030	9,359	5,872
50-54	MALE	146,211	139,828	4,057	2,326
	FEMALE	160,363	152,917	4,793	2,653
	TOTAL	306,574	292,745	8,850	4,979
55-59	MALE	145,603	140,132	3,587	1,884
	FEMALE	165,392	159,005	4,304	2,083
	TOTAL	310,995	299,137	7,891	3,967
60-64	MALE	126,323	122,160	2,803	1,360
	FEMALE	151,061	145,859	3,510	1,692
	TOTAL	277,384	268,019	6,313	3,052
65-69	MALE	101,023	98,076	1,953	994
	FEMALE	134,551	130,398	2,810	1,343
	TOTAL	235,574	228,474	4,763	2,337
70-74	MALE	73,235	71,293	1,285	657
	FEMALE	113,806	110,942	1,892	972
	TOTAL	187,041	182,235	3,177	1,629
75-79	MALE	48,145	46,859	810	476
	FEMALE	89,683	87,573	1,441	669
	TOTAL	137,828	134,432	2,251	1,145
80-84	MALE	28,513	27,747	480	286
	FEMALE	63,667	62,351	899	417
	TOTAL	92,180	90,098	1,379	703
85 & OVER	MALE	20,107	19,485	374	248
	FEMALE	53,801	52,706	772	323
	TOTAL	73,908	72,191	1,146	571
TOTAL	MALE	2,730,893	2,551,151	105,050	74,692
	FEMALE	3,006,144	2,811,685	116,229	78,230
	TOTAL	5,737,037	5,362,836	221,279	152,922
		(100.0%)	(93.4%)	(3.9%)	(2.7%)

Source: U.S. Bureau of the Census

**FIGURE F - 2**

**1980 MASSACHUSETTS POPULATION BY AGE**



**FIGURE F - 3**

**1980 MASSACHUSETTS POPULATION BY RACE**

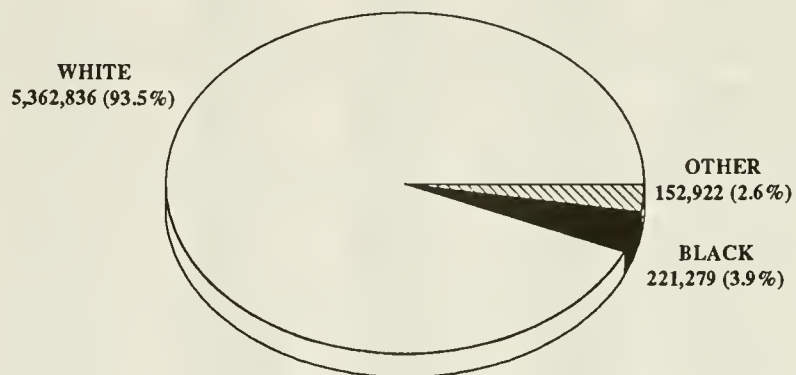


TABLE F-2  
MASSACHUSETTS POPULATION BY COUNTIES  
1960-1985

	Federal 1960	State 1965	Federal 1970	State 1975	Federal 1980	Estimate 1985*
STATE	5,148,578	5,295,281	5,689,170	5,789,478	5,737,037	5,814,873
<u>Counties</u>						
Barnstable	70,286	73,557	96,656	126,481	147,925	166,406
Berkshire	142,135	145,597	149,402	148,069	145,110	142,694
Bristol	398,488	415,242	444,301	461,852	474,641	484,635
Dukes	5,829	5,948	6,117	7,951	8,942	10,476
Essex	568,831	608,996	637,887	631,627	633,632	641,226
Franklin	54,864	57,687	59,210	63,420	64,317	65,790
Hampden	429,353	435,281	459,050	461,659	443,018	441,908
Hampshire	103,229	100,065	123,981	122,729	138,813	143,661
Middlesex	1,238,742	1,280,235	1,397,268	1,397,524	1,367,034	1,366,744
Nantucket	3,559	3,714	3,774	5,559	5,087	5,739
Norfolk	510,256	560,137	605,051	620,346	606,587	605,013
Plymouth	248,449	292,697	333,314	377,500	405,437	427,488
Suffolk	791,329	706,216	735,190	724,703	650,142	656,557
Worcester	583,228	609,909	637,969	640,058	646,352	656,536

\*Source of estimate is Massachusetts Institute for Social and Economic Research (MISER).



**TABLE F-3**  
**MASSACHUSETTS POPULATION BY CITY AND TOWN**  
**1970-1980**

<i>City/Town</i>	<i>1970 U.S. Census</i>	<i>1980 U.S. Census</i>	<i>City/Town</i>	<i>1970 U.S. Census</i>	<i>1980 U.S. Census</i>
Abington	12,334	13,517	Cohasset	6,954	7,174
Acton	14,770	17,544	Colrain	1,420	1,552
Acushnet	7,767	8,704	Concord	16,148	16,293
Adams	11,772	10,381	Conway	998	1,213
Agawam	21,717	26,271	Cummington	562	657
Alford	302	394	Dalton	7,505	6,797
Amesbury	11,388	13,971	Danvers	26,151	24,100
Amherst	26,331	33,229	Dartmouth	18,800	23,966
Andover	23,695	26,370	Dedham	26,938	25,298
Arlington	53,524	48,219	Deerfield	3,850	4,517
Ashburnham	3,484	4,075	Dennis	6,454	12,360
Ashby	2,274	2,311	Dighton	4,667	5,352
Ashfield	1,274	1,458	Douglas	2,947	3,730
Ashland	8,882	9,165	Dover	4,529	4,703
Athol	11,185	10,634	Dracut	18,214	21,249
Attleboro	32,907	34,196	Dudley	8,087	8,717
Auburn	15,347	14,845	Dunstable	1,292	1,671
Avon	5,295	5,026	Duxbury	7,636	11,807
Ayer	8,325	6,993	East Bridgewater	8,347	9,945
Barnstable	19,842	30,898	East Brookfield	1,800	1,955
Barre	3,825	4,102	East Longmeadow	13,029	12,905
Becket	929	1,339	Eastham	2,043	3,472
Bedford	13,513	13,067	Easthampton	13,012	15,580
Belchertown	5,936	8,339	Easton	12,157	16,623
Bellingham	13,967	14,300	Edgartown	1,481	2,204
Belmont	28,285	26,100	Egremont	1,138	1,311
Berkley	2,027	2,731	Erving	1,260	1,326
Berlin	2,099	2,215	Essex	2,670	2,998
Bernardston	1,659	1,750	Everett	42,485	37,195
Beverly	38,348	37,655	Fairhaven	16,332	15,759
Billerica	31,648	36,727	Fall River	96,898	92,574
Blackstone	6,566	6,570	Falmouth	15,942	23,640
Blandford	863	1,038	Fitchburg	43,343	39,580
Bolton	1,905	2,530	Florida	672	730
Boston	641,071	562,994	Foxborough	14,218	14,148
Boume	12,636	13,874	Framingham	64,048	65,113
Boxborough	1,451	3,126	Franklin	17,830	18,217
Boxford	4,032	5,374	Freetown	4,270	7,058
Boylston	2,774	3,470	Gardner	19,748	17,900
Braintree	35,050	36,337	Gay Head	118	220
Brewster	1,790	5,226	Georgetown	5,290	5,687
Bridgewater	11,829	17,202	Gill	1,100	1,259
Brimfield	1,907	2,318	Gloucester	27,941	27,768
Brockton	89,040	95,172	Goshen	483	651
Brookfield	2,063	2,397	Gosnold	83	63
Brookline	58,886	55,062	Grafton	11,659	11,238
Buckland	1,892	1,864	Granby	5,473	5,380
Burlington	21,980	23,486	Granville	1,008	1,204
Cambridge	100,361	95,322	Great Barrington	7,537	7,405
Canton	17,100	18,182	Greenfield	18,116	18,436
Carlisle	2,871	3,306	Groton	5,109	6,154
Carver	2,420	6,988	Groveland	5,382	5,040
Charlemont	897	1,149	Hadley	3,750	4,125
Charlton	4,654	6,719	Halifax	3,537	5,513
Chatham	4,554	6,071	Hamilton	6,373	6,960
Chelmsford	31,432	31,174	Hampden	4,572	4,745
Chelsea	30,625	25,431	Hancock	675	643
Cheshire	3,006	3,124	Hanover	10,107	11,358
Chester	1,025	1,123	Hanson	7,148	8,617
Chesterfield	704	1,000	Hardwick	2,379	2,272
Chicopee	66,676	55,112	Harvard	12,494	12,170
Chilmark	340	489	Harwich	5,892	8,971
Clarksburg	1,987	1,871	Hatfield	2,825	3,045
Clinton	13,383	12,771	Haverhill	46,120	46,865

**TABLE F-3 (Continued)**  
**MASSACHUSETTS POPULATION BY CITY AND TOWN**  
**1970-1980**

<i>City/Town</i>	<i>1970 U.S. Census</i>	<i>1980 U.S. Census</i>	<i>City/Town</i>	<i>1970 U.S. Census</i>	<i>1980 U.S. Census</i>
Hawley	224	280	Montgomery	446	637
Heath	383	482	Mount Washington	52	93
Hingham	18,845	20,339	Nahant	4,119	3,947
Hinsdale	1,588	1,707	Nantucket	3,774	5,087
Holbrook	11,775	11,140	Natick	31,057	29,461
Holden	12,564	13,336	Needham	29,748	27,901
Holland	931	1,589	New Ashford	183	159
Holliston	12,069	12,622	New Bedford	101,777	98,478
Holyoke	50,112	44,678	New Braintree	631	671
Hopedale	4,292	3,905	New Marlborough	1,031	1,160
Hopkinton	5,981	7,114	New Salem	474	688
Hubbardston	1,437	1,797	Newbury	3,804	4,529
Hudson	16,084	16,408	Newburyport	15,807	15,900
Hull	9,961	9,714	Newton	91,066	83,622
Huntington	1,593	1,804	Norfolk	4,656	6,363
Ipswich	10,750	11,158	North Adams	19,195	18,063
Kingston	5,999	7,362	North Andover	16,284	20,129
Lakeville	4,376	5,931	North Attleboro	18,665	21,095
Lancaster	6,095	6,334	North Brookfield	3,967	4,150
Lanesborough	2,972	3,131	North Reading	11,264	11,455
Lawrence	66,915	63,175	Northampton	29,664	29,286
Lee	6,426	6,247	Northborough	9,218	10,568
Leicester	9,140	9,446	Northbridge	11,795	12,246
Lenox	5,804	6,523	Northfield	2,631	2,386
Leominster	32,939	34,508	Norton	9,487	12,690
Leverett	1,005	1,471	Norwell	7,796	9,182
Lexington	31,886	29,479	Norwood	30,815	29,711
Leyden	376	498	Oak Bluffs	1,385	1,984
Lincoln	7,567	7,098	Oakham	730	994
Littleton	6,380	6,970	Orange	6,104	6,844
Longmeadow	15,630	16,301	Orleans	3,055	5,306
Lowell	94,23	992,418	Otis	820	963
Ludlow	17,580	18,150	Oxford	10,345	11,680
Lunenburg	7,419	8,405	Palmer	11,680	11,389
Lynn	90,294	78,471	Paxton	3,731	3,762
Lynnfield	10,826	11,267	Peabody	48,080	45,976
Malden	56,127	53,386	Pelham	937	1,112
Manchester	5,151	5,424	Pembroke	11,193	13,487
Mansfield	9,939	13,453	Pepperell	5,887	8,061
Marblehead	21,295	20,126	Peru	256	633
Marion	3,466	3,932	Petersham	1,014	1,024
Marlborough	27,936	30,617	Phillipston	872	953
Marshfield	15,223	20,916	Pittsfield	57,020	51,974
Mashpee	1,288	3,700	Plainfield	287	425
Mattapoisett	4,500	5,597	Plainville	4,953	5,857
Maynard	9,710	9,590	Plymouth	18,606	35,913
Medfield	9,821	10,220	Plympton	1,224	1,974
Medford	64,397	58,076	Princeton	1,681	2,425
Medway	7,938	8,447	Provincetown	2,911	3,536
Melrose	33,180	30,055	Quincy	87,966	84,743
Mendon	2,524	3,108	Randolph	27,035	28,218
Merrimac	4,245	4,451	Raynham	6,705	9,085
Methuen	35,456	36,701	Reading	22,539	22,678
Middleborough	13,607	16,404	Rehoboth	6,512	7,570
Middlefield	288	385	Revere	43,159	42,423
Middleton	4,044	4,135	Richmond	1,461	1,659
Milford	19,352	23,390	Rochester	1,770	3,205
Millbury	11,987	11,808	Rockland	15,674	15,695
Millis	5,686	6,908	Rockport	5,636	6,345
Millville	1,764	1,693	Rowe	277	336
Milton	27,190	25,860	Rowley	3,040	3,867
Monroe	216	179	Royalston	809	955
Monson	7,355	7,315	Russell	1,382	1,570
Montague	8,451	8,011	Rutland	3,198	4,334
Monterey	600	818	Salem	40,556	38,220

**TABLE F-3 (Continued)**  
**MASSACHUSETTS POPULATION BY CITY AND TOWN**  
**1970-1980**

<i>City/Town</i>	<i>1970 U.S. Census</i>	<i>1980 U.S. Census</i>	<i>City/Town</i>	<i>1970 U.S. Census</i>	<i>1980 U.S. Census</i>
Salisbury	4,179	5,973	West Newbury	2,254	2,861
Sandisfield	547	720	West Springfield	28,461	27,042
Sandwich	5,239	8,727	West Stockbridge	1,354	1,280
Saugus	25,110	24,746	West Tisbury	453	1,010
Savoy	322	644	Westborough	12,594	13,619
Scituate	16,973	17,317	Westfield	31,433	36,465
Seekonk	11,116	12,269	Westford	10,368	13,434
Sharon	12,367	13,601	Westhampton	793	1,137
Sheffield	2,374	2,743	Westminster	4,273	5,139
Shelburne	1,836	2,002	Weston	10,870	11,169
Sherborn	3,309	4,049	Westport	9,791	13,763
Shirley	4,909	5,124	Westwood	12,750	13,212
Shrewsbury	19,196	22,674	Weymouth	54,610	55,601
Shutesbury	489	1,049	Whately	1,145	1,341
Somerset	18,088	18,813	Whitman	13,059	13,534
Somerville	88,779	77,372	Wilbraham	11,984	12,053
South Hadley	17,033	16,399	Williamsburg	2,342	2,237
Southampton	3,069	4,137	Williamstown	8,454	8,741
Southborough	5,798	6,193	Wilmington	17,102	17,471
Southbridge	17,057	16,665	Winchendon	6,635	7,019
Southwick	6,330	7,382	Winchester	22,269	20,701
Spencer	8,779	10,774	Windsor	468	598
Springfield	163,905	152,319	Winthrop	20,335	19,294
Sterling	4,247	5,440	Woburn	37,406	36,626
Stockbridge	2,312	2,328	Worcester	176,572	161,799
Stoneham	20,725	21,424	Worthington	712	932
Stoughton	23,459	26,710	Wrentham	7,315	7,580
Stow	3,984	5,144	Yarmouth	12,033	18,449
Sturbridge	4,878	5,976			
Sudbury	13,506	14,027	<b>STATEWIDE TOTALS</b>	<b>5,689,170</b>	<b>5,737,037</b>
Sunderland	2,236	2,929			
Sutton	4,590	5,855			
Swampscott	13,578	13,837			
Swansea	12,640	15,461			
Taunton	43,756	45,001			
Templeton	5,863	6,070			
Tewksbury	22,755	24,635			
Tisbury	2,257	2,972			
Tolland	172	235			
Topsfield	5,225	5,709			
Townsend	4,281	7,201			
Truro	1,234	1,486			
Tyngsborough	4,204	5,683			
Tyringham	234	344			
Upton	3,484	3,886			
Uxbridge	8,253	8,374			
Wakefield	25,402	24,895			
Wales	852	1,177			
Walpole	18,149	18,859			
Waltham	61,582	58,200			
Ware	8,187	8,953			
Wareham	11,492	18,457			
Warren	3,633	3,777			
Warwick	492	603			
Washington	406	587			
Watertown	39,307	34,384			
Wayland	13,461	12,170			
Webster	14,917	14,480			
Wellesley	28,051	27,209			
Wellfleet	1,743	2,209			
Wendell	405	694			
Wenham	3,849	3,897			
West Boylston	6,369	6,204			
West Bridgewater	7,152	6,359			
West Brookfield	2,653	3,026			

**TABLE F-4**  
**POPULATION ESTIMATES, MASSACHUSETTS\***  
**1980-1987**

<i>AGE GROUP</i>		<i>TOTAL</i>	<i>MALE</i>	<i>FEMALE</i>
0-4	1980	337,215	173,029	164,186
	1981	342,815	175,696	167,119
	1982	348,357	178,322	170,035
	1983	353,950	180,977	172,973
	1984	359,499	183,609	175,890
	1985	365,227	186,336	178,891
	1986	370,644	188,911	181,733
	1987	376,252	191,570	184,682
5-9	1980	374,734	191,602	183,132
	1981	382,783	195,479	187,304
	1982	390,776	199,324	191,452
	1983	398,807	203,201	195,606
	1984	406,798	207,044	199,754
	1985	414,982	210,993	203,989
	1986	422,817	214,769	208,048
	1987	430,881	218,653	212,228
10-14	1980	461,332	235,669	225,663
	1981	448,375	228,815	219,560
	1982	435,497	222,005	213,492
	1983	422,551	215,154	207,397
	1984	409,663	208,337	201,326
	1985	396,601	201,433	195,168
	1986	383,806	194,672	189,134
	1987	370,866	187,825	183,041
15-19	1980	548,239	274,859	273,380
	1981	531,132	265,930	265,202
	1982	514,073	257,012	257,061
	1983	496,969	248,091	248,878
	1984	479,891	239,169	240,722
	1985	462,673	230,178	232,495
	1986	445,754	221,347	224,407
	1987	428,617	212,392	216,225
20-24	1980	552,902	270,713	282,189
	1981	542,736	265,216	277,520
	1982	532,642	259,763	272,879
	1983	522,468	254,260	268,208
	1984	512,367	248,792	263,575
	1985	502,121	243,261	258,860
	1986	492,076	237,835	254,241
	1987	481,926	232,344	249,582
25-29	1980	489,175	239,341	249,834
	1981	493,044	240,846	252,198
	1982	496,921	242,357	254,564
	1983	500,792	243,854	256,938
	1984	504,652	245,353	259,299
	1985	508,596	246,889	261,707
	1986	512,411	248,366	264,045
	1987	516,289	249,872	266,417



**TABLE F-4 (continued)**  
**POPULATION ESTIMATES, MASSACHUSETTS\***  
**1980-1987**

<i>AGE GROUP</i>		<i>TOTAL</i>	<i>MALE</i>	<i>FEMALE</i>
30-34	1980	446,395	217,649	228,746
	1981	457,542	224,039	233,503
	1982	468,636	230,411	238,225
	1983	479,789	236,803	242,986
	1984	490,905	243,186	247,719
	1985	502,135	249,625	252,510
	1986	513,131	255,936	257,195
	1987	524,287	262,335	261,952
35-39	1980	348,552	169,502	179,050
	1981	359,341	174,328	185,013
	1982	370,113	179,129	190,984
	1983	380,898	183,950	196,948
	1984	391,654	188,748	202,906
	1985	402,564	193,633	208,931
	1986	413,195	198,363	214,832
	1987	424,014	203,202	220,812
40-44	1980	278,748	134,925	143,823
	1981	292,647	141,203	151,444
	1982	306,457	147,434	159,023
	1983	320,348	153,710	166,638
	1984	334,166	159,940	174,226
	1985	348,205	166,286	181,919
	1986	361,903	172,459	189,444
	1987	375,788	178,731	197,057
45-49	1980	278,261	134,444	143,817
	1981	282,833	136,275	146,558
	1982	287,346	138,073	149,273
	1983	291,899	139,901	151,998
	1984	296,417	141,708	154,709
	1985	301,088	143,582	157,506
	1986	305,517	145,343	160,174
	1987	310,083	147,175	162,908
50-54	1980	306,574	146,211	160,363
	1981	301,594	143,584	158,010
	1982	296,655	140,958	155,697
	1983	291,665	138,318	153,347
	1984	286,727	135,704	151,023
	1985	281,677	133,039	148,638
	1986	276,790	130,444	146,346
	1987	271,823	127,817	144,006
55-59	1980	310,995	145,603	165,392
	1981	305,203	142,750	162,453
	1982	299,475	139,931	159,544
	1983	293,700	137,078	156,622
	1984	287,965	134,260	153,705
	1985	282,086	131,356	150,730
	1986	276,401	128,548	147,853
	1987	270,622	125,709	144,913

**TABLE F-4 (continued)**  
**POPULATION ESTIMATES, MASSACHUSETTS\***  
**1980-1987**

<i>AGE GROUP</i>		<i>TOTAL</i>	<i>MALE</i>	<i>FEMALE</i>
60-64	1980	277,384	126,323	151,061
	1981	276,091	125,512	150,579
	1982	274,784	124,707	150,077
	1983	273,496	123,894	149,602
	1984	272,181	123,073	149,108
	1985	270,891	122,260	148,631
	1986	269,624	121,478	148,146
	1987	268,307	120,655	147,652
65-69	1980	235,574	101,023	134,551
	1981	238,038	101,871	136,167
	1982	240,454	102,695	137,759
	1983	242,917	103,538	139,379
	1984	245,344	104,370	140,974
	1985	247,853	105,241	142,612
	1986	250,240	106,059	144,181
	1987	252,690	106,899	145,791
70-74	1980	187,041	73,235	113,806
	1981	189,630	74,235	115,395
	1982	192,183	75,222	116,961
	1983	194,759	76,222	118,537
	1984	197,323	77,210	120,113
	1985	199,983	78,250	121,733
	1986	202,448	79,192	123,256
	1987	205,049	80,195	124,854
75-79	1980	137,828	48,145	89,683
	1981	140,300	48,996	91,304
	1982	142,752	49,844	92,908
	1983	145,222	50,699	94,523
	1984	147,694	51,545	96,149
	1985	150,251	52,437	97,814
	1986	152,579	53,227	99,352
	1987	155,087	54,094	100,993
80-84	1980	92,180	28,513	63,667
	1981	93,363	28,809	64,554
	1982	94,522	29,101	65,421
	1983	95,692	29,393	66,299
	1984	96,841	29,682	67,159
	1985	98,073	29,995	68,078
	1986	99,160	30,242	68,918
	1987	100,350	30,547	69,803
85+	1980	73,908	20,107	53,801
	1981	75,099	20,191	54,908
	1982	76,276	20,277	55,999
	1983	77,449	20,351	57,098
	1984	78,611	20,426	58,185
	1985	79,867	20,539	59,328
	1986	81,008	20,614	60,394
	1987	82,187	20,695	61,492



**TABLE F-4 (continued)**  
**POPULATION ESTIMATES, MASSACHUSETTS\***  
**1980-1987**

<i>AGE GROUP</i>		<i>TOTAL</i>	<i>MALE</i>	<i>FEMALE</i>
TOTAL	1980	5,737,037	2,730,893	3,006,144
	1981	5,752,566	2,733,775	3,018,791
	1982	5,767,919	2,736,565	3,031,354
	1983	5,783,371	2,739,394	3,043,977
	1984	5,798,698	2,742,156	3,056,542
	1985	5,814,873	2,745,333	3,069,540
	1986	5,829,504	2,747,805	3,081,699
	1987	5,845,118	2,750,710	3,094,408

\*THESE ESTIMATES ARE DERIVED FROM 1980 U.S. CENSUS COUNT AND PROJECTIONS FOR 1990 PREPARED BY THE MASSACHUSETTS INSTITUTE FOR SOCIAL AND ECONOMIC RESEARCH (MISER).

# APPENDICES



1. RECORD NUMBER  
**357191**

1A. CERTIFICATE NUMBER  
(DPH USE ONLY)

2. FACILITY NUMBER

NOTE: Confidential section is detached from record and is not maintained in public file.

22. CENSUS

C H I L D  M O T H E R  F A T H E R  I N F O R M A T I O N	3C. COUNTY	3D. CITY/TOWN		3E. REGISTERED NUMBER	
	3A. FACILITY NAME—IF NOT IN FACILITY, NUMBER AND STREET				
	NAME 4A. FIRST		4B. MIDDLE		4C. LAST
	5. SEX	6A. PLURALITY (Specify Single, Twin, etc.)	6B. BIRTH ORDER (If not single Specify Order First, Second, etc.)		7. TIME M
	NAME 9A. FIRST		9B. MIDDLE		9C. LAST
	BIRTHPLACE 10A. CITY/TOWN		10B. STATE/COUNTRY		11. DATE OF BIRTH (Month, Day, Year)
	RESIDENCE 12A. NUMBER AND STREET (Do not use mailing address)		12B. CITY/TOWN		12C. COUNTY
	12D. STATE		12E. ZIP CODE		
	NAME 13A. FIRST		13B. MIDDLE		13C. LAST
	BIRTHPLACE 14A. CITY/TOWN		14B. STATE/COUNTRY		15. DATE OF BIRTH (Month, Day, Year)
16A. I (WE) CERTIFY THAT THE INFORMATION APPEARING ABOVE IS TRUE AND CORRECT (Signatures(s))					
16B. RELATIONSHIP					
16C. DATE SIGNED (Month, Day, Year)		16D. MAILING ADDRESS (If different from item #12 above)		16E. CITY	
16F. STATE		16G. ZIP CODE			
17A. TYPE <input type="checkbox"/> AT-BIRTH <input type="checkbox"/> POST-NATAL <input type="checkbox"/> CERTIFIER ONLY		17B. TITLE <input type="checkbox"/> MD/DO <input type="checkbox"/> CNM <input type="checkbox"/> OTH RN <input type="checkbox"/> MIDWIFE <input type="checkbox"/> OTHER			
17C. SIGNATURE		17D. TYPE OR PRINT NAME (CH 46, SEC 389)		17E. LICENSE NUMBER	
17F. NO & STREET		17G. CITY/TOWN		17H. STATE	
17I. ZIP CODE		17J. DATE SIGNED (Month, Day, Year)			
18. DATE OF RECORD (Month, Day, Year)		19. SUPPLEMENT FILED (Month, Day, Year)		20. CLERK/REGISTRAR	
21. CLERK/REGISTRAR DPH USE ONLY					

NOT A LEGAL RECORD

CONFIDENTIAL INFORMATION — CHAPTER 111 SECTION 24B AS AMENDED — PHYSICIAN TO COMPLETE ITEMS IN RED WITHIN 24 HOURS (CHAP. 46 SEC. 3)									
23A. OCCUPATION PAST YEAR		23B. INDUSTRY PAST YEAR		24A. RACE <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian Indian <input type="checkbox"/> Other Asian <input type="checkbox"/> Amer Indian <input type="checkbox"/> Other (Specify)		24B. ANCESTRY		25. EDUCATION A. Elem/Sec (0-12)   B. College (0-4.5+)	
26A. OCCUPATION PAST YEAR		26B. INDUSTRY PAST YEAR		27A. RACE <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian Indian <input type="checkbox"/> Other Asian <input type="checkbox"/> Amer Indian <input type="checkbox"/> Other (Specify)		27B. ANCESTRY		28. EDUCATION A. Elem/Sec (0-12)   B. College (0-4.5+)	
PREGNANCY HISTORY (Complete All Sections)		29. PRIOR LIVE BIRTHS A. NOW LIVING <input type="checkbox"/> NONE <input type="checkbox"/> B. BORN LIVE-NOW DEAD <input type="checkbox"/> NONE <input type="checkbox"/>		C. DATE OF LAST LIVE BIRTH (Month, Day, Year)		30. TERMINATIONS A. BEFORE 20 WKS <input type="checkbox"/> NONE <input type="checkbox"/> B. 20 WKS OR MORE <input type="checkbox"/> NONE <input type="checkbox"/>		DATE LAST TERMINATION (Month, Day, Year)	
31. DATE LAST MENSES BEGAN (Month, Day, Year)		32. MONTH OF PREG. PRENATAL CARE BEGAN (First, Second, etc.)		33. TOTAL NUMBER PRENATAL VISITS <input type="checkbox"/> NONE <input type="checkbox"/>		34A. TYPE OF PRACTITIONER PROVIDING PRENATAL CARE <input type="checkbox"/> MD/DO <input type="checkbox"/> PA <input type="checkbox"/> NP <input type="checkbox"/> CNM <input type="checkbox"/> OTHER RN <input type="checkbox"/> MIDWIFE <input type="checkbox"/> OTHER (Specify)			
34B. SITE OF PRENATAL CARE <input type="checkbox"/> PRIVATE <input type="checkbox"/> HOSP CLINIC <input type="checkbox"/> HMO <input type="checkbox"/> CHC <input type="checkbox"/> OTHER (Specify)		34C. PRENATAL CARE METHOD OF PAYMENT <input type="checkbox"/> BLUE CROSS <input type="checkbox"/> COMM INS <input type="checkbox"/> HMO <input type="checkbox"/> MEDICAID <input type="checkbox"/> MEDICARE <input type="checkbox"/> HEALTHY START <input type="checkbox"/> OTHER GOV'T <input type="checkbox"/> WORK COMP <input type="checkbox"/> SELF-PAY <input type="checkbox"/> FREE CARE <input type="checkbox"/> OTHER (Specify)				35A. ALCOHOL		35B. TOBACCO	
35C. OTHER CONCURRENT CONDITIONS (Separate by commas—Include up to 8 items)									
36. METHOD OF DELIVERY <input type="checkbox"/> VAGINAL AFTER PRIOR C-SECTION <input type="checkbox"/> FORCEPS/VACUUM <input type="checkbox"/> SPONTANEOUS <input type="checkbox"/> PRIMARY C-SECTION <input type="checkbox"/> REPEAT C-SECTION <input type="checkbox"/> OTHER (Specify)									
37. COMPLICATIONS OF LABOR (Separate by commas—Include up to 10 items)					38. OBSTETRIC PROCEDURES (Separate by commas—Include up to 10 items)				
39. DELIVERY METHOD OF PAYMENT <input type="checkbox"/> BLUE CROSS <input type="checkbox"/> COMM INS <input type="checkbox"/> HMO <input type="checkbox"/> MEDICAID <input type="checkbox"/> MEDICARE <input type="checkbox"/> HEALTHY START <input type="checkbox"/> OTHER GOV'T <input type="checkbox"/> WORK COMP <input type="checkbox"/> SELF-PAY <input type="checkbox"/> FREE CARE <input type="checkbox"/> OTHER (Specify)					40. BIRTHWEIGHT LBS      OZ      OR GRAMS				
41. APGAR SCORE (0-10) A. 1 Minute      B. 5 Minute		42. CONGENITAL MALFORMATIONS (Include up to 5 items)			43. CONDITIONS OF NEWBORN (Include up to 5 items)				
44. AT TIME OF THIS REPORT CHILD IS <input type="checkbox"/> LIVING <input type="checkbox"/> DEAD			45. IS MOTHER MARRIED? <input type="checkbox"/> YES <input type="checkbox"/> NO			46. IS MOTHER BREASTFEEDING? <input type="checkbox"/> YES <input type="checkbox"/> NO			

Detach and Return to Department of Public Health — Registry of Vital Records and Statistics,  
150 Tremont Street; Room B-3, Boston, MA 02111

[INSTRUCTIONS ON REVERSE SIDE]

FOR USE BY  
PHYSICIANS AND  
MEDICAL EXAMINERS

The Commonwealth of Massachusetts

STANDARD CERTIFICATE OF DEATH  
REGISTRY OF VITAL RECORDS AND STATISTICS

REGISTERED NUMBER

STATE USE ONLY

STATE USE ONLY

1.

72 PLACE 74

75 HOSPITAL 78

2

9 RACE

19 NATIVITY 20

32 RESIDENCE 34

35 OUT OF STATE 37

38 CENSUS 41

42 AUTOPSY

43 MED. EXAM.

BLACK INK ONLY

R-301R

SIGNATURE: BD HEALTH AGT

(DATE)

29 RECEIVED IN THE  
CITY OR TOWN OF

CLERK'S SIGNATURE

(DATE RECEIVED)

DECEDENT		NAME		FIRST		MIDDLE		LAST		SEX		3		DATE OF DEATH (Mo. Day Yr.)		STATE USE ONLY	
1		PLACE OF DEATH (CITY OR TOWN)		COUNTY OF DEATH		HOSPITAL OR OTHER INSTITUTION - Name (If not in either, give street and number)		IF IN HOSPITAL DO A 1 Yes or No									
2a		PLACE		19 a White, Black, American Indian, etc. (Specify)		AGE Last Birthday (Yrs.)		UNDER 1 YEAR MOS		UNDER 1 DAY HOURS		DATE OF BIRTH (Mo. Day Yr.)		STATE OF BIRTH (If not in U.S.A. name country)			
5		MARRIED NEVER MARRIED WIDOWED OR DIVORCED		6a		SPOUSE (If wife, give maiden name)		7		USUAL OCCUPATION (Prior, if retired)		8		KIND OF BUSINESS OR INDUSTRY			
9		SOCIAL SECURITY NUMBER		10		IF U.S. WAR VETERAN SPECIFY WAR		11a		RESIDENCE STREET AND NUMBER CITY OR TOWN COUNTY STATE ZIP CODE		11b					
12		FATHER FULL NAME		13		STATE OF BIRTH (If not in U.S.A. name country)		14		MOTHER NAME (GIVEN)		MAIDEN)		STATE OF BIRTH (If not in U.S.A. name country)		16a	
15a		INFORMANT NAME AND ADDRESS		15b		NAME OF FACILITY		16b		RELATIONSHIP		17a					
17a		TYPE OF DISPOSITION (Specify Burial, Cremation, Other)		17b		DATE OF DISPOSITION		17c		PLACE OF DISPOSITION AND LOCATION		CITY OR TOWN		STATE			
18a		FUNERAL SERVICE LICENSEE		18b		NAME OF FACILITY		18c		ADDRESS OF FACILITY		19a					
19a		IMMEDIATE CAUSE (ENTER ONLY ONE CAUSE PER LINE FOR (a) AND (c)) (PRINT OR TYPE LEGIBLY)		19b				19c				Interval between onset and death					
PART I		(a)		DUE TO OR AS A CONSEQUENCE OF				Interval between onset and death									
PART II		(b)		DUE TO OR AS A CONSEQUENCE OF				Interval between onset and death									
PART III		(c)		OTHER SIGNIFICANT CONDITIONS. Conditions contributing to death but not related to cause given in Part I				AUTOPSY (Yes or No)		21		22		WAS CASE REFERRED TO MED. EXAM. Yes or No.			
23		ACC. SUICIDE HOW UNDER OR PENDING INVEST (Specify)		24a		DATE OF INJURY (Mo. Day Yr.)		24b		HOUR OF INJURY		24c		DESCRIBE HOW INJURY OCCURRED			
25		INJURY AT WORK (Specify Yes or No)		26a		PLACE OF INJURY - At home, farm, street, factory, office, building, etc. (Specify)		26b		LOCATION		STREET		CITY OR TOWN		STATE	
25a		To the best of my knowledge death occurred at the time, date and place and due to the cause(s) stated (Signature and Title)		25b		DATE SIGNED (Mo. Day Yr.)		25c		HOUR OF DEATH		25d		PRONOUNCED DEAD (Mo. Day Yr.)		25e	
26		NAME OF ATTENDING PHYSICIAN IF OTHER THAN CERTIFIER (Type or Print)		26a		DATE SIGNED (Mo. Day Yr.)		26b		HOUR OF DEATH		26c		PRONOUNCED DEAD (Mo. Day Yr.)		26d	
27		NAME AND ADDRESS OF CERTIFYING PHYSICIAN OR MEDICAL EXAMINER (Type or Print)		27a		DATE SIGNED (Mo. Day Yr.)		27b		HOUR OF DEATH		27c		PRONOUNCED DEAD (Mo. Day Yr.)		27d	
28		BURIAL PERMIT ISSUED DN		28a		DATE		28b		CITY OR TOWN OF		28c		STATE			

# The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS

## REPORT OF FETAL DEATH

STATE FILE NUMBER

MOTHER

FATHER

CAUSE OF FETAL DEATH

DISPOSITION

CERTIFIER

HOSPITAL - NAME (If not in hospital, give street and number)				CITY, TOWN OR LOCATION OF DELIVERY		COUNTY OF DELIVERY	
1a DATE OF DELIVERY (Month Day Year)		2b HOUR OF DELIVERY		3 SEX OF FETUS		4 WEIGHT OF FETUS	
5a MOTHER - MAIDEN NAME FIRST MIDDLE LAST				5b AGE (At time of this delivery)		6a RESIDENCE - STATE	
6b CITY, TOWN OR LOCATION				6c STREET AND NUMBER		6d COUNTY	
7 RACE - (e.g. White, Black, American Indian, etc.) (Specify)		8 EDUCATION (Specify only highest grade completed) Elementary or Secondary (10-12) College (14 or 5+)		9 DATE LAST NORMAL MENSTRUATION BEGAN (Month Day Year)		10 IS MOTHER MARRIED? (Specify yes or no)	
11a MONTH OF PREGNANCY WHEN PRENATAL CARE BEGAN (First, second, etc.) (Specify)		11b PRENATAL VISITS Total number (If none, state)		11c THIS BIRTH - Single (Twin, triplet, etc.) (Specify)		11d IF NOT SINGLE BIRTH - Born first, second, third, etc. (Specify)	
12a FATHER - NAME FIRST MIDDLE LAST		12b AGE (At time of this delivery)		12c RACE (e.g. White, Black, American Indian, etc.) (Specify)		12d EDUCATION (Specify only highest grade completed) Elementary or Secondary (10-12) College (14 or 5+)	
13a FATHER - NAME FIRST MIDDLE LAST		13b AGE (At time of this delivery)		13c RACE (e.g. White, Black, American Indian, etc.) (Specify)		13d EDUCATION (Specify only highest grade completed) Elementary or Secondary (10-12) College (14 or 5+)	
14a FATHER - NAME FIRST MIDDLE LAST		14b AGE (At time of this delivery)		14c RACE (e.g. White, Black, American Indian, etc.) (Specify)		14d EDUCATION (Specify only highest grade completed) Elementary or Secondary (10-12) College (14 or 5+)	
15 PART I Fetal or maternal condition directly causing fetal death		IMMEDIATE CAUSE (ENTER ONLY ONE CAUSE PER LINE FOR 15a, 15b, AND 15c)				Specify Fetal or Maternal	
15a		DUE TO OR AS A CONSEQUENCE OF				Specify Fetal or Maternal	
15b		DUE TO OR AS A CONSEQUENCE OF				Specify Fetal or Maternal	
15c						Specify Fetal or Maternal	
16 PART II OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER (Conditions contributing to fetal death but not related to cause given in 15a)		17 FETUS DIED BEFORE LABOR DURING LABOR OR DELIVERY (Specify)		18 PHYSICIAN'S ESTIMATE OF GESTATION (Weeks)		19 AUTOPSY (Specify yes or no)	
20 COMPLICATIONS OF PREGNANCY (Describe or write none)		21 COMPLICATIONS OF LABOR AND/OR DELIVERY (Describe or write none)		22 CONGENITAL MALFORMATIONS OR ANOMALIES OF FETUS (Describe or write none)		23 NAME OF PHYSICIAN OR ATTENDANT (Type or print)	
24 NAME OF PERSON COMPLETING REPORT (Type or print)		25 TITLE		26 NAME OF FUNERAL DIRECTOR (If any)		27 NAME OF FACILITY (Hospital or Funeral Home)	
28 BURYAL, CREMATION, OR BY HOSPITAL		29 CEMETERY OR CREMATORY - NAME OR WRITE "NONE"		30 LOCATION		31 CITY OR TOWN	
32 NAME OF FUNERAL DIRECTOR (If any)		33 NAME OF FACILITY (Hospital or Funeral Home)		34 ADDRESS OF FACILITY		35 STATE	
36 I HEREBY CERTIFY that this delivery occurred on the date stated and product of conception was not a live birth.		37 Signature of Attending Physician or Medical Examiner		38 TITLE		39 DATE	

### DEFINITION:

"Fetal death" per chapter 111 section 202 of the M.G.L. means death prior to the complete expulsion or extraction from its mother of a fetus, irrespective of the duration of pregnancy, as indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. A fetal death does NOT include an induced abortion as defined in section 12K of chapter 112 of M.G.L. Spontaneous abortions are to be included.

### TO BE REPORTED:

Only fetal deaths of twenty weeks or more gestation or of a weight of 350 grams or more are to be reported.

### INSTRUCTIONS:

Return completed report within 10 days to the Registry of Vital Records and Statistics, Room B-3, 150 Tremont Street, Boston, MA 02111





## The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS

(State number file)

## CERTIFICATE OF MARRIAGE

(City or town making return)

## 1 Place of Marriage

This certificate must be delivered to the person before whom the marriage is to be contracted before he proceeds to solemnize the same

Registered No.

City or Town (Do not enter name of village or section of city or town) 2 Date of Marriage (Month) (Day) (Year) Intention No.

3 FULL NAME GROOM		12 FULL NAME BRIDE	
3A SURNAME AFTER MARRIAGE		12A SURNAME AFTER MARRIAGE	
4 AGE	5 OCCUPATION	13 AGE	14 OCCUPATION
6 RESIDENCE NO. STREET CITY OR TOWN STATE		15 RESIDENCE NO. STREET CITY OR TOWN STATE	
7 NUMBER OF MARRIAGE (1st, 2nd, 3rd, etc.)	8 WIDOWED OR DIVORCED	16 NUMBER OF MARRIAGE (1st, 2nd, 3rd, etc.)	17 WIDOWED OR DIVORCED
9 BIRTHPLACE (City or town) (State or country)		18 BIRTHPLACE (City or town) (State or country)	
10 NAME OF FATHER		19 NAME OF FATHER	
11 MAIDEN NAME OF MOTHER		20 MAIDEN NAME OF MOTHER	
21 THE INTENTION OF MARRIAGE by the above-named persons was duly entered by me in the records of the (City or Town) of (Name of city or town) according to law, this day of 19 Certificate issued (Month) (Day) (Year) by (City or Town Clerk or Registrar)			
22 I HEREBY CERTIFY that I joined the above-named persons in marriage at No. (If marriage was solemnized in a church, give its NAME instead of street and number) on (Month) (Day) (Year) Signature (Print or type name) Official station (Minister of the Gospel, Clergyman, Priest, Rabbi, or Justice of the Peace) Residence No. St., City or Town of			
23 Certificate received by city or town clerk (Month) (Day) (Year) CLERK OR REGISTRAR			

NOT VALID AFTER

THIS IS A PERMANENT RECORD. Use only durable black ink or approved black typewriter ribbon. Every item of information should be carefully supplied. ALTERATIONS AND ERASURES IN THIS CERTIFICATE ARE FORBIDDEN. PENALTY FOR VIOLATION, ONE HUNDRED DOLLARS. SEE CHAP. 207, §§ 28, 28A, 48, 49, 54, 57 and CHAP. 46, § 18.

THIS CERTIFICATE IS NOT TO BE USED OUTSIDE OF MASSACHUSETTS.

The Commonwealth of Massachusetts  
 DEPARTMENT OF PUBLIC HEALTH  
 REGISTRY OF VITAL RECORDS AND STATISTICS  
 CERTIFICATE OF ABSOLUTE  
 DIVORCE OR ANNULMENT  
 (Chap. 208, Sec. 46 G.L.)  
 R-408

HUSBAND - NAME		FIRST	MIDDLE	LAST
USUAL RESIDENCE - STREET ADDRESS			CITY, TOWN OR LOCATION	
2a COUNTY		2d STATE	2b. DATE OF BIRTH (Mo., Day, Yr.)	4. NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)
5a USUAL RESIDENCE - STREET ADDRESS		5b. CITY, TOWN OR LOCATION		
6a COUNTY		6d STATE	6b. DATE OF BIRTH (Mo., Day, Yr.)	8. NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)
9 DATE OF THIS MARRIAGE (Mo., Day, Yr.)		10a NUMBER OF CHILDREN BORN ALIVE OF THIS MARRIAGE		10b. NUMBER OF CHILDREN UNDER AGE 18 IN THIS FAMILY

FOR COURT USE ONLY			
COUNTY OF JUDGMENT		TITLE OF COURT	
11. DATE OF JUDGMENT NISI (Mo., Day, Yr.)		13. TYPE OF JUDGMENT - DIVORCE OR ANNULMENT (Specify)	14. DATE OF JUDGMENT ABSOLUTE (Mo., Day, Yr.)
12. DOCKET NUMBER	16. NAME OF PLAINTIFF		17. CAUSE FOR WHICH GRANTED
15. SIGNATURE OF CERTIFYING OFFICIAL		18b. TITLE OF OFFICIAL	



**REGISTRY OF VITAL RECORDS AND STATISTICS  
STAFF**

**REGISTRAR**  
**Elaine B. Trudeau**

**ASSISTANT REGISTRAR  
FOR REGISTRATION AND  
CERTIFICATION**  
Frances A. Vitagliano

**ASSISTANT REGISTRAR  
FOR STATISTICS**  
Phyllis J. Zeuli

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of Automation  
Sharyn B. Drew  
Amberzine G. Joseph  
Michael Puangco

**DATA QUALITY ASSURANCE**  
Karin A. Barrett, Coordinator  
William Cuddyer  
Sally A. Woster, Field  
Representative

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Waleska Ortiz, Asst. Supervisor  
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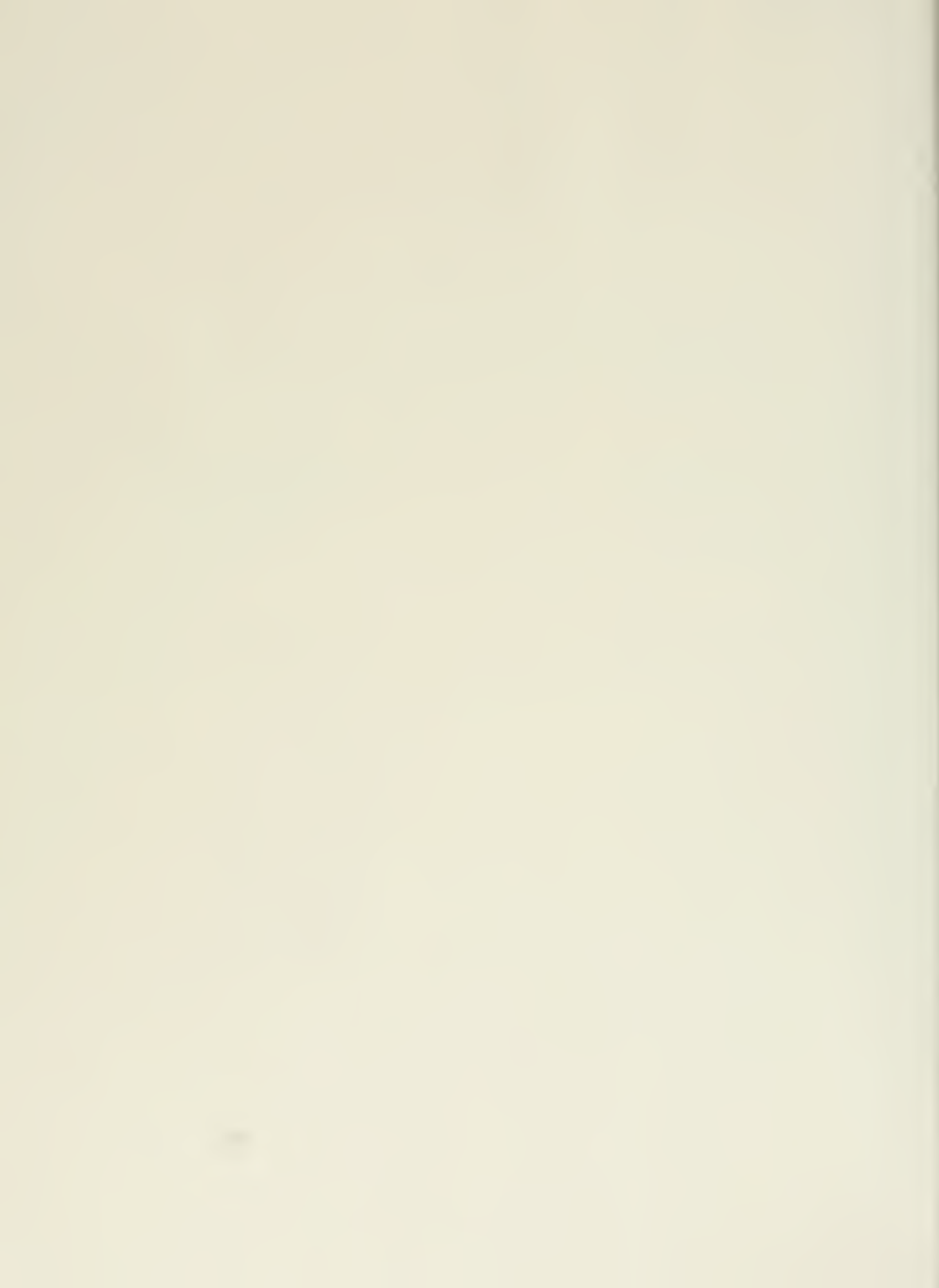
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Assistant Commissioner, Bureau of Health Statistics, Research and Evaluation



















